

FOR COMMENT

Stormwater Management Plan

MA MS4 General Permit Requirements

*Prepared for:
Duxbury, Massachusetts*

EPA NPDES Permit Number: MAR041034

June 2019



Quincy, MA • Woburn, MA • Middletown, CT • Hyannis, MA

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Certification

Authorized Representative (Optional): All reports, including SWPPPs, inspection reports, annual reports, monitoring reports, reports on training and other information required by this permit must be signed by a person described in Appendix B, Subsection 11.A or by a duly authorized representative of that person in accordance with Appendix B, Subsection 11.B. If there is an authorized representative to sign MS4 reports, there must be a signed and dated written authorization.

The authorization letter is:

- Attached to this document (document name listed below)

- Publicly available at the website below

“I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.”

Printed Name

Signature _____

Date

Small MS4 Authorization

The NOI was submitted on

The NOI can be found at the following (document name or web address):

Authorization to Discharge was granted on

The Authorization Letter can be found (document name or web address):



**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 1
5 POST OFFICE SQUARE, SUITE 100
BOSTON, MA 02109-3912**

VIA EMAIL

June 4, 2019

René Read
Town Manager

And;

Peter Buttkus
DPW Director
Town Hall
878 Tremont Street
Duxbury, MA. 02332
buttkus@town.duxbury.ma.us

Re: National Pollutant Discharge Elimination System Permit ID #: MAR041034, Town of Duxbury

Dear Peter Buttkus:

The 2016 NPDES General Permit for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems in Massachusetts (MS4 General Permit) is a jointly issued EPA-MassDEP permit. Your Notice of Intent (NOI) for coverage under this MS4 General Permit has been reviewed by EPA and appears to be complete. You are hereby granted authorization by EPA and MassDEP to discharge stormwater from your MS4 in accordance with the applicable terms and conditions of the MS4 General Permit, including all relevant and applicable Appendices. This authorization to discharge expires at midnight on **June 30, 2022**.

For those permittees that certified Endangered Species Act eligibility under Criterion C in their NOI, this authorization letter also serves as EPA's concurrence with your determination that your discharges will have no effect on the listed species present in your action area, based on the information provided in your NOI.

As a reminder, your first annual report is due by **September 30, 2019** for the reporting period from May 1, 2018 through June 30, 2019.

Information about the permit and available resources can be found on our website: <https://www.epa.gov/npdes-permits/massachusetts-small-ms4-general-permit>. Should you have any questions regarding this permit please contact Newton Tedder at tedder.newton@epa.gov or (617) 918-1038.

Sincerely,

A handwritten signature in blue ink that reads "Thelma Murphy". The signature is fluid and cursive, with a long horizontal flourish extending to the right.

Thelma Murphy, Chief
Stormwater and Construction Permits Section
Office of Ecosystem Protection
United States Environmental Protection Agency, Region 1

and;

A handwritten signature in black ink that reads "Lealdon Langley". The signature is cursive and somewhat stylized, with a prominent loop at the end.

Lealdon Langley, Director
Wetlands and Wastewater Program
Bureau of Water Resources
Massachusetts Department of Environmental Protection

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1.0 BACKGROUND

1.1 Stormwater Regulation

The Stormwater Phase II Final Rule was promulgated in 1999 and was the next step after the 1987 Phase I Rule in EPA's effort to preserve, protect, and improve the Nation's water resources from polluted stormwater runoff. The Phase II program expands the Phase I program by requiring additional operators of MS4s in urbanized areas and operators of small construction sites, through the use of NPDES permits, to implement programs and practices to control polluted stormwater runoff. Phase II is intended to further reduce adverse impacts to water quality and aquatic habitat by instituting the use of controls on the unregulated sources of stormwater discharges that have the greatest likelihood of causing continued environmental degradation. Under the Phase II rule all MS4s with stormwater discharges from Census designated Urbanized Area are required to seek NPDES permit coverage for those stormwater discharges.

1.2 Permit Program Background

On May 1, 2003, EPA Region 1 issued its Final General Permit for Stormwater Discharges from Small Municipal Separate Storm Sewer Systems (2003 small MS4 permit) consistent with the Phase II rule. The 2003 small MS4 permit covered "traditional" (i.e., cities and towns) and "non-traditional" (i.e., Federal and state agencies) MS4 Operators located in the states of Massachusetts and New Hampshire. This permit expired on May 1, 2008 but remained in effect until operators were authorized under the 2016 MS4 general permit, which became effective on July 1, 2018.

1.3 Stormwater Management Plan (SWMP)

The SWMP describes and details the activities and measures that will be implemented to meet the terms and conditions of the permit. The SWMP accurately describes the Town's plans and activities. The document should be updated and/or

modified during the permit term as the Town's activities are modified, changed or updated to meet permit conditions during the permit term. The main elements of the stormwater management program are (1) a public education program in order to affect public behavior causing stormwater pollution, (2) an opportunity for the public to participate and provide comments on the stormwater program (3) a program to effectively find and eliminate illicit discharges within the MS4 (4) a program to effectively control construction site stormwater discharges to the MS4 (5) a program to ensure that stormwater from development projects entering the MS4 is adequately controlled by the construction of stormwater controls, and (6) a good housekeeping program to ensure that stormwater pollution sources on municipal properties and from municipal operations are minimized. The hyperlinks provided in Appendix A offer additional information and supporting documents related to the MS4 Permit and the aforementioned minimum control measures.

1.4 Town Specific MS4 Background

The Town must give special consideration to and meet eligibility requirements for their discharges to be able to apply for coverage under the General Permit. Eligibility will be determined based on three categories: Endangered Species Act, National Historic Preservation Act, and Water Quality Impaired Waters. The Town must establish that discharges from its storm drain system do not adversely impact endangered species, critical habitats, and historic properties in order to be covered by the General Permit. Furthermore, the Town must identify all receiving waters that have been classified as Water Quality Impaired Waters by the MA DEP. The Town of Duxbury and its surrounding water bodies are shown on *Figure 1: System Locus*. The Notice of Intent (NOI) for coverage under the Small MS4 General Permit was submitted to EPA and MassDEP on September 27, 2018. A copy of the NOI is provided in Appendix B.

2.0 SWMP COMPONENTS

2.1 Parties Involved in Implementation

Stormwater programs in the Town of Duxbury are currently a responsibility of the Director of Public Works. The members of the Duxbury stormwater committee are listed in the table below. This committee has prioritized detailed goals and concerns regarding the implementation of a stormwater program.

Name	Title	Department
Peter Buttkus	Director	Public Works
	<i>Additional Members</i>	
Lori Wolfe	Director of Marketing & Communications	NSRWA
Valerie Massard	Planning Director	Planning Department
Scott J. Lambiase	Building Commissioner Director of Inspectional Services	Building Department Inspectional Services Department
Joe Grady	Conservation Administrator	Conservation Committee

2.2 Documentation Regarding Endangered Species

In order to comply with part 1.9.1 of the NPDES Permit, the Town has attached documentation in Appendix D supporting Duxbury's eligibility determination of Criterion B with regard to federal Endangered and Threatened Species and Critical Habitat Protection. Criterion B states that, "under section 7 of the ESA, the consultation resulted in either a no jeopardy opinion (formal consultation) or a written concurrence by USFWS on a finding that the stormwater discharges and MA MS4 General Permit Appendix C Page 3 of 7 discharge related activities are "not likely to adversely affect" listed species or critical habitat (informal consultation)." In this case, USFWS provided a letter in place of a concurrence letter for informal consultation.

The attachments in Appendix D include the aforementioned letter, as well as the results of the IPaC environmental review process. Using the IPaC environmental review process, five endangered species have been identified within Duxbury's boundaries: the

Northern Long-Eared Bat, the Piping Plover, the Red Knot, the Roseate Tern, and the Plymouth Redbelly Turtle. None of these species have critical habitats designated within the Town, and the MS4 Permit will not adversely affect any of the listed species within the MS4 area.

2.3 Documentation Regarding Historic Properties

The Town has attached documentation in Appendix E supporting their eligibility determination regarding Historic Properties, in compliance with part 1.9.2 of the Permit. This document, Appendix D of the Massachusetts General MS4 Permit, includes information supporting Duxbury's determination as Criterion A, stating that the discharges do not have the potential to cause effects on historic properties.

Historic site considerations will be evaluated further as part of the design/permitting of new/retrofit BMPs proposed for implementation as part of MS4 compliance. Regarding the National Historic Preservation Act, under 36 CFR 800, this facility is an existing facility authorized by the previous Permit, and is not undertaking any activity involving subsurface land disturbance less than 1 acre. This MS4 Permit will have "no potential to cause effects," in accordance with 36 CFR 800.3(a)(1).

2.4 Documentation Regarding Discharges

Attached in Appendix F is the documentation for tracking any new or increased discharges granted by MassDEP in compliance with part 2.1.2 of the Permit. At this time, the Town of Duxbury has no new and/or increased discharges. Duxbury will document any new and/or increased discharges on the form provided in Appendix F and include project specific information regarding best management practices implemented for those discharges. A sample discharges form is provided in Appendix F.

2.5 Sanitary Sewer Overflow (SSO) Inventory

In the event of an overflow or bypass, a notification must be reported within 24 hours by phone to MassDEP, EPA, and other relevant parties. The verbal notification should be followed up with a written report following MassDEP's Sanitary Sewer Overflow

(SSO)/Bypass notification form within five calendar days of the time you become aware of the overflow, bypass, or backup.

As of October 2018, there are no known SSOs that discharge to the MS4. An inventory of all known locations where SSOs have discharged to the MS4 will be maintained by the Town if any are found. This inventory shall include SSOs resulting from inadequate conveyance capacities, or where interconnectivity of the storm and sanitary sewer infrastructure allows for connection of flow between the systems. A sample inventory form is provided in Appendix G and includes the following information:

1. Location (approximate street crossing/address and receiving water, if any);
2. A clear statement of whether the discharge entered a surface water directly or entered the MS4;
3. Date(s) and time(s) of each known SSO occurrence (i.e., beginning and end of any known discharge);
4. Estimated volume(s) of the occurrence;
5. Description of the occurrence indicating known or suspected cause(s);
6. Mitigation and corrective measures completed with dates implemented; and
7. Mitigation and corrective measures planned with implementation schedules.

2.6 IDDE Program and Bylaws

The Town's IDDE plan will be developed during the first year of the new permit. The IDDE program is detailed in section 3.3 of Minimum Control Measures. The Town's current Stormwater Management and Erosion Control Regulations are included in the Town of Duxbury Zoning Bylaws, *Section 611 Land Clearing and Grading Regulations*, September 2018, a copy of which are provided in Appendix H. The Town's is in the process of developing comprehensive Stormwater Design Guidelines and IDDE regulations. Once finalized the SWMP will be updated with these regulations.

2.7 Sediment and Erosion Control Procedures

Written procedures for the Town's site inspections and enforcement of sediment and erosion control procedures in accordance with part 2.3.5 of the Permit, Construction Site

Stormwater Runoff Control, are detailed in the sections 3.4 and 3.5, Minimum Control Measures. This information includes the party responsible for site inspections and implementation of procedures.

2.8 Public Drinking Water Supply Sources Protection

The town has developed practices in effort to avoid or minimize impacts to surface public drinking water supply sources. These efforts are detailed in Minimum Control Measures section 3.6, Good Housekeeping and Pollution Prevention. The Town plans to prioritize the enforcement of the existing stormwater pollution prevention plans.

2.9 Activities to Monitor Discharges

The Town will identify any discharges within public drinking water supply source areas and give priority to outfall inspections and screening required of the Minimum Control Measures in section 3.0.

2.10 Annual Program Evaluation

To comply with part 4.1 of the Permit, the Town annually self-evaluates compliance with the terms and conditions of the Permit and submits each self-evaluation as part of the Fiscal Year annual report. The 2018 NPDES Phase II Small MS4 General Permit Annual Report is attached as Appendix I.

3.0 MINIMUM CONTROL MEASURES

In effort to reduce pollutants and comply with part 2.3 of the Permit, the Town focuses on the following minimum control measures. These sections describe the Town's practices to comply with each control measure, the responsible person(s) or party of each practice, and the goal(s) for each BMP of each control measure. The BMPs for each of the six minimum control measures are outlined in the forms provided in Appendix J.

3.1 Public Education and Outreach

The Town shall implement an education program that includes educational goals based on stormwater issues of significance within the MS4 area. The ultimate objective of a public education program, permit part 2.3.2, is to increase knowledge and change behavior of the public so that the pollutants in stormwater are reduced.

The Town implemented a public education program as required by the 2003 permit and will continue that program and make the necessary adjustments to meet the additional requirements of the 2016 permit.

The program must include the education of the following four audiences: 1. residents, 2. businesses, institutions (churches, hospitals), and commercial facilities, 3. developers (construction), and 4. industrial facilities.

3.1.1 Background

The Town of Duxbury has implemented several actions in efforts to reach public education and outreach goals. The Town of Duxbury Conservation Agent has participated in and is on the steering committee for the Watershed Action Plan for the South Coastal Watershed, being funded by the EOE. Process of education through this forum is ongoing. Harbormaster Shellfish Warden also takes school classes for tour of estuaries and teaches ecology of this resource. Duxbury Bay Maritime School also teaches maritime ecology to the classes each summer (1600 students). Montessori School students take water samples at the Bluefish River and identify pathogens. In addition, the Duxbury Bay Commission and Duxbury Beach Reservation conduct interactive programs

that involve many volunteers and users of these resources. The Beach Reservation maintains an agreement with Mass. Audubon to continue their endangered species monitoring and weekly educational programs. Responsible parties for public education and outreach efforts include the Department of Public Work and the North and South River Watershed Association.

The Town participates in the North and South Watershed Association WaterSmart program. The WaterSmart program supports the educational Water All Around You program, the water conservation/water quality Gardening Green Expo, media/press releases on water conservation, the Rain Barrel Sale, the WaterSmart Business Program for a town business assessment, the Pet Waste Outreach Program, and social media/e-news publications on the NSRWA Facebook page. The Water All Around You program includes the Greenscapes Program, which provides students with knowledge of the stormwater system and new residents with informational brochures.

3.1.2 Best Management Practices

- I. Distribution of a minimum of two (2) educational messages over the permit term to the required audiences within the permit term (5 years), as listed below.
 - A. Residents
 1. Publish outreach materials.
 2. Distribute new resident packets to residents within Wetland Protection Areas.
 3. Develop/maintain stormwater website and/or utilize Town social media for outreach. Provide specific information directed towards residents.
 4. “Water All Around You” school educational program.
 5. Distribute pet waste control information to residents when they (re)apply for a pet license.
 6. An educational message is included in all water bills once per year.
 - B. Businesses, Institutions, and Commercial Facilities
 1. Include stormwater information in permit materials.

2. Develop/maintain stormwater website and/or utilize Town social media for outreach. Provide specific information directed towards businesses, institutions, and commercial facilities.
3. An educational message is included in all water bills once per year.

C. Developers (Construction)

1. Include stormwater information in permit materials.
2. Review and update application forms to meet the new requirements.
3. Develop/maintain stormwater website and/or utilize Town social media for outreach. Provide specific information directed towards developers.
4. Distribute information to septic maintenance contractors.

D. Industrial Facilities

1. Distribute stormwater information to industrial groups based on zoning and property use.
2. Develop/maintain stormwater website and/or utilize Town social media for outreach. Provide specific information directed towards industrial facilities.
3. An educational message is included in all water bills once per year.

3.2 Public Involvement and Participation

The objective of the public involvement and participation control measure, permit part 2.3.3., is for the Town to provide the public with opportunities to engage in activities that promote good stormwater practices. The public must also be given the chance to review the Stormwater Management Plan (SWMP) and its implementation.

3.2.1 Background

Responsible parties for public involvement and participation efforts include the Planning Department, Department of Public Works, and Citizen Groups. The Town hosts an annual beach cleanup day every spring, and will continue to host clean-up days in the future. The Town will engage and host local events for adults and students in the area to get involved in environmental stewardship of local wetlands, rivers and Duxbury Bay. The Town of Duxbury will continue to support community groups such as “Duxbury Litter Sweep” and will continue coordinating town-wide cleanup efforts.

3.2.2 Best Management Practices

- I. Public Review
 - A. Stormwater Management Plan Review (SWMP)
 1. Allow annual review of Stormwater Management Plan and posting of Stormwater Management Plan on website.
- II. Public Participation
 - A. Use Stormwater Website to publish SWMP and annual reports. Website should contain a space for electronically soliciting public comments.
 1. Make physical copy available at Duxbury Town Hall.
 - B. Continued support of “Duxbury Litter Sweep” community group and coordinating Town-wide cleanup efforts.
 - C. Continue to sponsor Paint collections four times per year and household hazardous waste collections two times per year.

3.3 Illicit Discharge Detection and Elimination (IDDE) Program

The Town shall put an IDDE program into place, permit part 2.3.4, in order to find and eliminate non-stormwater discharge sources. Procedures shall be implemented to fix any prevalent issues in the Town’s storm sewer system. As identified in the Notice of Intent (NOI), attached in Appendix B, the following 119 outfall structures listed in the table below discharge to the Town of Duxbury’s MS4 area. These outfall structures are displayed on *Figure 2: MS4 Urbanized Areas.*

Waterbody that receives flow from the MS4 and segment ID if applicable	Number of outfalls into receiving water segment	Chloride	Chlorophyll-a	Dissolved Oxygen/DO Saturation	Nitrogen	Oil & Grease/ PAH	Phosphorus	Solids/ TSS/ Turbidity	E. coli	Enterococcus	Other pollutant(s) causing impairments
Bassett Brook	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Bluefish River (MA94-30)	7	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Fecal Coliform
Duxbury Bay (MA94-15)	14	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Fecal Coliform
Garside Reservoir	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Halls Brook	3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Island Creek	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Island Creek Pond (MA94073)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Non-Native Aquatic Plants
Lower Chandler Pond	2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Mill Pond (MA94101)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Philips Brook	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
South River (MA94-08)	2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Unnamed Stream (42.011504, -70.722371)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Unnamed Stream (42.013039, -70.701326)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Unnamed Stream (42.019882, -70.697426)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Unnamed Stream (42.022696, -70.710174)	3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Unnamed Stream (42.023223, -70.68735)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Unnamed Stream (42.023463, -70.709286)	3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Unnamed Stream (42.02389, -70.71117)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Unnamed Stream (42.028189, -70.705795)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Unnamed Stream (42.037432, -70.725774)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Unnamed Stream (42.038993, -70.762297)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Unnamed Stream (42.040671, -70.737423)	3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Unnamed Stream (42.042048, -70.690598)	2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Unnamed Stream (42.050909, -70.727442)	2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Unnamed Stream (42.052354, -70.752497)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Unnamed Stream (42.056068, -70.715331)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Unnamed Stream (42.061577, -70.710605)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Unnamed Stream (42.067622, -70.715866)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Unnamed Stream (42.077267, -70.708458)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Unnamed Stream (42.088364, -70.729978)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Unnamed Waterbody (42.030228, -70.737484)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Unnamed Waterbody (42.031033, -70.733933)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Unnamed Waterbody (42.035051, -70.676098)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Unnamed Waterbody (42.041903, -70.721865)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Unnamed Waterbody (42.042124, -70.7166)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Unnamed Waterbody (42.044671, -70.693901)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Unnamed Waterbody (42.056088, -70.70456)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unnamed Waterbody (42.056296, -70.707584)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unnamed Waterbody (42.060363, -70.705422)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unnamed Waterbody (42.066453, -70.719355)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unnamed Wetland (42.008175, -70.70953)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unnamed Wetland (42.018946, -70.687297)	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unnamed Wetland (42.019121, -70.720865)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unnamed Wetland (42.019397, -70.723378)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unnamed Wetland (42.019743, -70.728365)	2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unnamed Wetland (42.020148, -70.752811)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unnamed Wetland (42.020455, -70.75356)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unnamed Wetland (42.02133, -70.709701)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unnamed Wetland (42.023313, -70.706913)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unnamed Wetland (42.024529, -70.714872)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unnamed Wetland (42.028695, -70.752945)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unnamed Wetland (42.029793, -70.671078)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unnamed Wetland (42.040531, -70.74168)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unnamed Wetland (42.043301, -70.678268)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unnamed Wetland (42.044267, -70.763566)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unnamed Wetland (42.044962, -70.756132)	2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unnamed Wetland (42.048033, -70.668327)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unnamed Wetland (42.049425, -70.703902)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unnamed Wetland (42.049452, -70.71688)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unnamed Wetland (42.052161, -70.688085)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unnamed Wetland (42.053514, -70.712909)	3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unnamed Wetland (42.055888, -70.687047)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unnamed Wetland (42.058588, -70.733269)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unnamed Wetland (42.059527, -70.710914)	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unnamed Wetland (42.061624, -70.733822)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unnamed Wetland (42.061736, -70.730145)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unnamed Wetland (42.062792, -70.662617)	2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unnamed Wetland (42.067279, -70.716801)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unnamed Wetland (42.081829, -70.754088)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unnamed Wetland (42.083353, -70.748023)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Unnamed Wetland (42.085624, -70.736329)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
West Brook	3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3.3.1 Background

Responsible party for IDDE efforts is the Department of Public Works. The Town has verified drainage connectivity mapping and continues to update outfall mapping and inspections. The Town continues to perform the sampling of outfalls with flow during dry weather days. The Town continues to comply with local bylaws, state and federal requirements.

The Town of Duxbury has been working to remediate priority outfalls that discharge bacteria and sediments to Duxbury Bay and its upstream waterbodies. The Department of Public Works is responsible for the IDDE effort. Completing this work will mitigate a

direct discharge to Duxbury Bay by implementing deep sump catch basins, drain manholes, and underground filtration systems.

3.3.2 Best Management Practices

I. Legal Authority

A. The IDDE program shall include adequate legal authority to prohibit illicit discharges; investigate suspected illicit discharges; eliminate illicit discharges, including discharges from properties not owned by or controlled by the MS4 that discharge into the MS4 system; and implement appropriate enforcement procedures and actions. Adequate legal authority consists of a currently effective ordinance, by-law, or other regulatory mechanism. This ordinance, by-law, or other regulatory mechanism was a requirement of the MS4-2003 permit and was required to be effective by May 1, 2008.

II. SSO Inventory

A. Develop SSO Inventory Database within one year of effective permit date that logs historical SSOs that have occurred in the last 5 years, as discussed in further detail in section 2.5.

1. Coordinate with Water and Sewer Department for tracking of any future SSOs.

III. Storm Sewer System Map

A. Update map within 2 years of effective date of permit and complete full system map 10 years after effective date of permit.

1. Make an electronic and physical copy of the map available to the public via the stormwater website and Duxbury Town Hall.
2. Map/verify 10% of system per year during permit years 1-10.
 - a) Phase I will be focused on during Years 1 and 2, while Phase II will be focused on during Years 3 thru 10.
3. Integrate system map updates with planned sewer expansion projects.

- IV. Written IDDE Program Development
 - A. Update IDDE program within 1 year of effective permit date to comply with permit requirements. The IDDE program and permit attachments will be available at Duxbury Town Hall, 878 Tremont Street, Duxbury MA 02332.
- V. Implement IDDE Program
 - A. Implement catchment investigations according to program and permit conditions within 18 months of the effective date of the Permit.
 - 1. Continue to enforce bylaws and regulations.
 - 2. Draft and implement stormwater management regulations.
 - 3. Coordinate water quality monitoring with dry weather screening
 - a) New monitoring system should include surveying for illicit discharge detection.
- VI. Employee Training
 - A. Coordinate annual stormwater training and incorporate with training required in Section 6.2.IV.B.
- VII. Dry Weather Screening
 - A. Conduct screening in accordance with outfall screening procedure and permit conditions.
 - 1. Screen 25% of outfalls per year during permit years 2-5.
- VIII. Conduct Wet Weather Screening
 - A. Conduct screening in accordance with outfall screening procedure and permit conditions, and as determined by dry weather screening results.
- IX. Conduct ongoing screening as necessary, and upon completion of the IDDE program.

3.4 Construction Site Stormwater Runoff Control

The Town must implement a program focused on controlling stormwater runoff from construction sites. The program shall minimize or eliminate erosion on site and maintain the site so that the sediment is not transported in stormwater or allowed to discharge to a water of the U.S. through the Town's MS4, as stated in part 2.3.5 of the Permit.

3.4.1 Background

The Town of Duxbury has adopted construction site stormwater runoff measures on erosion and sediment control inspection procedures and have continued to enforce local, state and federal bylaws. As-built drawings are now routinely submitted to the Town in PDF format in addition to paper format. The Department of Public Works, Planning Department, Building Department, and Conservation Department are all responsible for construction site stormwater runoff control BMPs.

3.4.2 Best Management Practices

- I. Site Inspection and Enforcement of Erosion and Sediment Control (ESC) Measures.
 - A. Complete written procedures of site inspections and enforcement procedures within 1 year of effective date of the Permit.
 1. Recommend standards and practices for town inspection procedures. Seek input from relevant town groups (e.g. Building, Health, Conservation, etc.)
 2. Develop inspection form that includes ESC measures and integrate them with existing Town forms.
- II. Site Plan Review
 - A. Complete written procedures of site plan review and begin implementation within 1 year of the effective date of the Permit.
 1. Include site plan review workflow chart with permit applications.
 2. Review current Town procedure regarding when a Construction General Permit (CGP) is needed.

- a) CGP required for disturbance of 1 acre or greater

III. Erosion and Sediment Control Ordinance

- A. Adoption of requirements for construction operators to implement a sediment and erosion control program within 1 year of the effective date of the Permit.
 - 1. Set limit of 1 acre before project requires inspection by Town official.
 - a) Coordinate limits and requirements with fill/extraction permits.
 - 2. Update all Town forms with erosion and sediment control checklist.

IV. Waste Control

- A. Adoption of requirements to control wastes, including but not limited to, discarded building materials, concrete truck wash out, chemicals, litter, and sanitary wastes within 1 year of the effective date of the Permit.
 - 1. Incorporate into Town's general conditions for building permit and/or site plan review.
 - 2. Review and modify Town bylaws and/or regulations to meet new requirements.

3.5 Post Construction Stormwater Management in New Development and Redevelopment

The objective of an effective post-construction stormwater management program, part 2.3.6 of the Permit, is to reduce the discharge of pollutants found in stormwater to the MS4 through the retention or treatment of stormwater after construction on new or redeveloped sites and to ensure proper maintenance of installed stormwater controls.

3.5.1 Background

The Town of Duxbury has post-construction stormwater management regulations are included in Appendix H. These regulations pertain to as-built plans for stormwater control, ranking of priority MS4-owned properties, green infrastructure development, street and parking lot design for impervious cover, and adoption of management practices that will prevent and minimize impacts to water quality during development. The Department of Public Works, Planning Department, Building Department, Inspectional Services Department, and Conservation Department, are all responsible for stormwater management in new construction and redevelopment. The Town is in the process of developing comprehensive Stormwater Design Guidelines, which will further define enforcement procedures on new development and redevelopment; and this SWMP will be updated with these guidelines once they are approved.

3.5.2 Best Management Practices

I. Post-Construction Ordinance

- A. The Town shall develop or modify, as appropriate, an ordinance or other regulatory mechanism within two (2) years of the effective date of the permit.

II. As-Built Plans For On-Site Stormwater Control

- A. Require submission of electronic data for as-built drawings (e.g. PDF, AutoCAD, GIS) within 2 years of completed construction.
 1. O&M certification should include contact and contract information for contractors that perform O&M on the private BMPs.

III. Inventory and Priority Ranking of MS4-Owned Properties That May Be Retrofitted with BMPs

A. Conduct detailed inventory of MS4 owned properties and rank for retrofit potential within 4 years of permit effective date.

1. Inventory Town parcels for existing stormwater BMPs and identify opportunities for GI/LID retrofits.

a) Include schools, parks, recreation facilities, police/fire/EMS, libraries, public works, and town administrative offices.

IV. Allow Green Infrastructure

A. Within 4 years of permit effective date, develop a report assessing existing local regulations to determine the feasibility of making green infrastructure practices allowable when appropriate site conditions exist.

1. Review bylaws and applications in order to incorporate green infrastructure and low impact development language as needed.

2. Educate the public on green infrastructure through existing BMP retrofits/demonstration projects.

V. Street Design and Parking Lot Guidelines

A. Within 4 years of permit effective date, develop a report assessing requirements that affect the creation of impervious cover. The assessment will help determine if changes to design standards for streets and parking lots can be modified to support low impact design options

1. Publish street design and parking lot guidelines on stormwater website.

VI. Ensure any stormwater controls or management practices for new development and redevelopment will prevent or minimize impacts to water quality.

A. Within 2 years of permit effective date, adopt, amend, or modify regulation mechanisms to meet permit requirements.

1. Review rules and regulations and modify as needed. Include evaluation of subdivision/redevelopment requirements for long-term operations and management of private BMPs.

- a) Work to establish cash (instead of bond) surety with developers to create binding obligation to keep stormwater runoff onsite.
2. Continue to implement Post-Construction Site Runoff Control Bylaw.

3.6 Good Housekeeping and Pollution Prevention for Town Owned Operations

An operations and maintenance program must be implemented by the Town for Town-owned operations. The program shall focus on preventing or reducing pollutant runoff and protecting water quality from Town operations.

3.6.1 Background

The Town of Duxbury conducts annual sweeping of all streets and monitors active construction sites and performs additional sweeping around these sites to reduce materials entering the catch basins. The roads leading into Town are checked regularly and swept as needed to control silts.

Catch basins are cleaned annually. In 2017, the Duxbury Department of Public Works completed cleaning 124 catch basins. The Town also worked with the Plymouth County Mosquito Control Board to remove blockages, brush, and other debris from ditches and streams off Washington Street to prevent overflows or stagnation. The Department of Public Works also works to reduce road salt usage by using a 5:1 salt to sand ratio. The Department of Public Works is responsible for pollution prevention BMPs.

Hazardous waste collection takes place on four days annually. Additionally, the Town transfer station offers waste oil and anti-freeze collection to Town residents as well as access to HHW events in other South Shore Recycling Cooperative communities. The Town also sponsors a drug take back event to minimize pharmaceutical waste from entering the groundwater.

3.6.2 Best Management Practices

- I. Create written O&M procedures for parks and open spaces, buildings and facilities, and vehicles and equipment within 2 years of permit effective date.
 - A. Develop standards of practice for O&M of each public facility and combine in Town O&M Manual.
- II. Inventory all Town-owned parks and open spaces, buildings and facilities (including their storm drains), and vehicles and equipment within 2 years of the permit effective date.
 - A. Develop a capital improvement plan that deals with flooding prevention measures and water quality improvements.
 1. Coordinate implementation with Section 5.2.II of the Permit.
- III. Establish and implement program for repair and rehabilitation of MS4 infrastructure within 2 years of the permit effective date.
 - A. Inspect assets and assess condition to develop program
 - B. Review annual budget to set aside funding.
- IV. Stormwater Pollution Prevention Plan (SWPPP) For Maintenance Garages, New Facility Designs, Transfer Stations and Other Waste-Handling Facilities.
 - A. Develop plan within 2 years of permit effective date.
 - B. Schedule annual employee training.
 1. Look into workshop and speaking opportunities and seek formal training for all departments
 - C. Develop an asset management system to process complaints, permits, inspections, and maintenance.
 - D. Continue to implement improved recycling standards and requirements.
 1. Advertise rigid plastic and antifreeze recycling to public. Enforce new standards for private haulers.
- V. Catch Basin Cleaning
 - A. Develop and implement a catch basin cleaning schedule with a goal of ensuring no catch basin is more than 50% full.
 - B. Document catch basins inspected and cleaned, including total mass removed and proper disposal.

- C. Develop electronic data collection system for tracking, inspection, and maintenance.
 - 1. Update catch basin cleaning requirements to require electronic data collection that is compatible with the Town's GIS and asset management system.
- VI. Street Sweeping Program
 - A. Sweep streets (rural and uncurbed exceptions apply) a minimum of once a year in the spring.
 - B. Each annual report shall include number of miles cleaned and volume or mass of material removed. Continue to implement street sweeping program.
- VII. Road Salt Use Optimization Program
 - A. Develop and implement winter road maintenance procedures including use and storage of salt and sand.
 - B. Minimize the use of salts
 - 1. Calibrate spreaders to reduce salt use.
 - C. Ensure snow is not disposed into waters.
 - D. Continue working on salt reduction strategies.
- VIII. Plymouth County Mosquito Control Project
 - 1. Coordinate annual meeting with Control Project Staff to discuss potential stormwater impacts from mosquito control applications and potential BMP retrofits that can minimize standing water in catch basins (e.g. leaching structures)
- IX. Massachusetts Department of Transportation
 - 1. Coordinate annual meeting with MassDOT District 5 Staff to discuss stormwater system interconnections, common receiving waters, and opportunities for collaboration.

4.0 WATER QUALITY BASED REQUIREMENTS

In compliance with the Clean Water Act (CWA), each state must administer a program to monitor and assess the quality of its surface and groundwater. Section 305(b) process of the CWA entails assessing each use for rivers, lakes, and coastal waters, and causes and sources of impairment are identified wherever possible. Section 303(d) of the CWA along with the regulations at 40 CFR 130.7 requires states to identify those water bodies that are not expected to meet surface water quality standards (SWQS) after the implementation of technology based controls, and prioritize them for the development of Total Maximum Daily Loads (TMDLs). A TMDL establishes the maximum amount of a pollutant that may be introduced into a water body and still ensure attainment and maintenance of water quality standards. The 303(d) *List of Impaired Waters* (303(d) List) lists each water body in one of the following five categories:

- 1) Unimpaired and not threatened for all designated uses;
- 2) Unimpaired for some uses and not assessed for others;
- 3) Insufficient information to make assessments for any uses;
- 4) Impaired or threatened for one or more uses, but not requiring the calculation of a TMDL; or
- 5) Impaired or threatened for one or more uses and requiring a TMDL.

Waters listed in Category 5 constitute the 303(d) List and are to be reviewed and approved by the EPA. An abbreviated version of *Table 1: Impaired Waters, TMDLs and Impairments* is shown below, and is also represented in Appendix B, the Notice of Intent. An overall map of the Town of Duxbury’s stormwater system is attached as *Figure 4: Stormwater System Map*.

Category	Name	Segment ID	Impairment Cause
5 – “Water Requiring a TMDL”	Bluefish River	MA 94-30	Fecal Coliform
5 – “Water Requiring a TMDL”	Duxbury Bay	MA 94-15	Fecal Coliform

4.1 Background

These best management practices aim to improve and mitigate stormwater water quality impairments. This program will focus on impaired waters requiring a TMDL in the South Coastal Watershed, shown on *Figure 3: Town Watersheds*.

The entirety of the Town is located within the South Coastal Watershed. This area can be seen on *Figure 3 – Town Watersheds*. The South Coastal Watershed has an approved TMDL for pathogens. These impairments require Duxbury to follow the specific requirements listed under Appendix H to mitigate bacteria and pathogen discharges from the MS4 to the respective watershed. The Duxbury Public Works Department is responsible for adhering to these requirements.

The Massachusetts category 5 impaired waters requiring a TMDL in Duxbury are all located within the South Coastal watershed. As shown in *Table 1 – Impaired Waters, TMDLs and Impairments*, these water bodies include Bluefish River and Duxbury Bay. The Town should prioritize sampling outfalls to these water bodies for their respective impairments, also listed in *Table 1*. The Duxbury Public Works Department is the primary party responsible for the BMPs to meet these TMDL requirements.

4.2 Additional Impairment Requirements

4.2.1 Public Education and Outreach

A. Bacteria or Pathogens

- Distribute an annual message that encourages the proper management of pet waste, including noting any existing ordinances where appropriate. This message is included annually in water bills.
- Disseminate educational materials to dog owners at the time of issuance or renewal of dog license, or other appropriate time.

- Provide information to owners of septic systems about proper maintenance in any catchment that discharges to a water body impaired for bacteria or pathogens.

4.2.2 Illicit Discharge

A. Bacteria or Pathogens

- Implement the illicit discharge program required by the Permit. Catchments draining to any water body impaired for bacteria or pathogens shall be designated either Problem Catchments or HIGH priority in implementation of the IDDE program.

TABLE 1

IMPAIRED WATERS, TMDLS AND IMPAIRMENTS

Town of Duxbury, Massachusetts
Massachusetts Year 2014 Integrated List of Waters
Impaired Waters

Category	Name	Segment ID	Description	Size	Units	Impairment Cause
5 - "Water Requiring a TMDL"	Bluefish River	MA94-30	The waters north and west of a line from Saquish Head to the tip of Plymouth Beach and from there to High Cliff, Plymouth excluding Back River and Bluefish River, Duxbury and Jones River, Kingston.	12.694	SQUARE MILES	Fecal Coliform
	Duxbury Bay	MA94-15	Saltmarsh north of Harrison Street, Duxbury to mouth at Duxbury Bay, Duxbury.	0.065	SQUARE MILES	Fecal Coliform
						*TMDL not required (Non-pollutant)

FIGURE 1
SYSTEM LOCUS

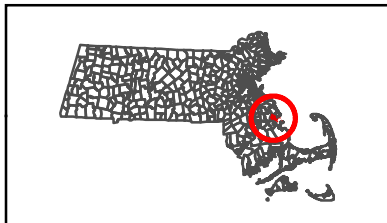
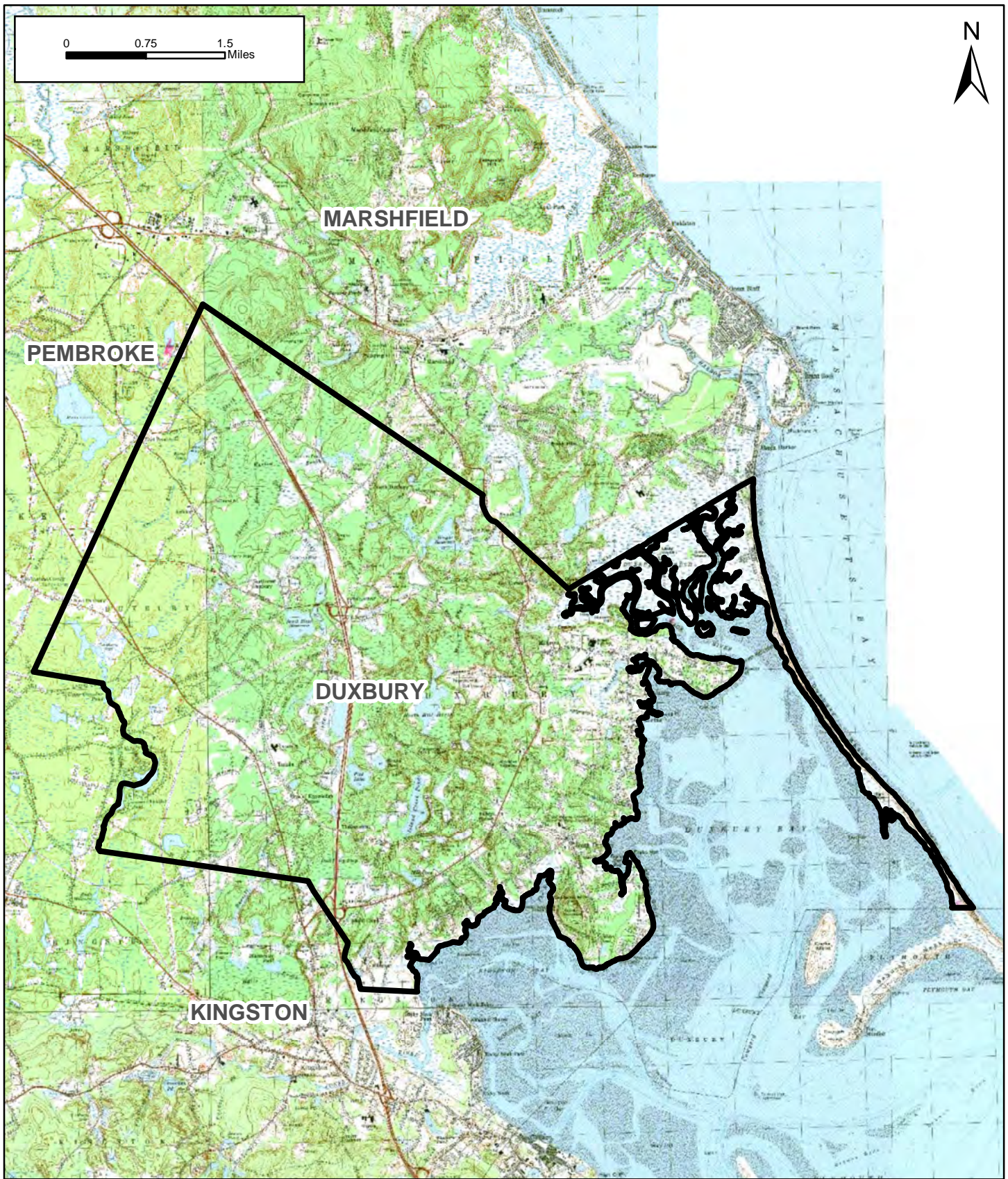


Figure 1
System Locus
Duxbury, Massachusetts



FIGURE 2

MS4 URBANIZED AREAS

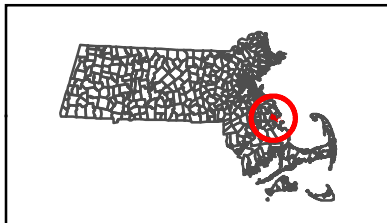
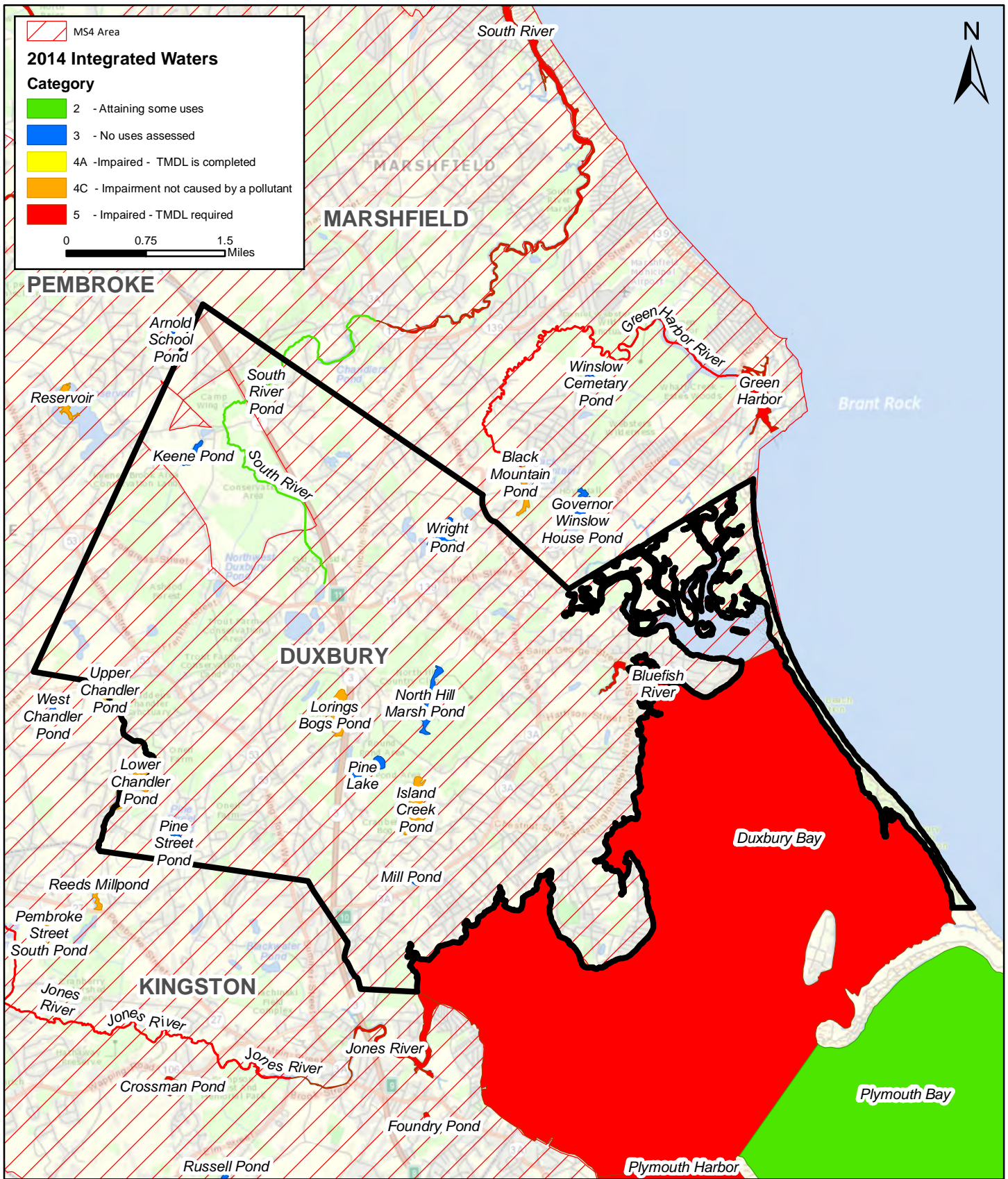


Figure 2
MS4 Urbanized Areas
Duxbury, Massachusetts



FIGURE 3

TOWN WATERSHEDS

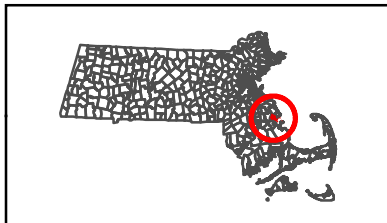
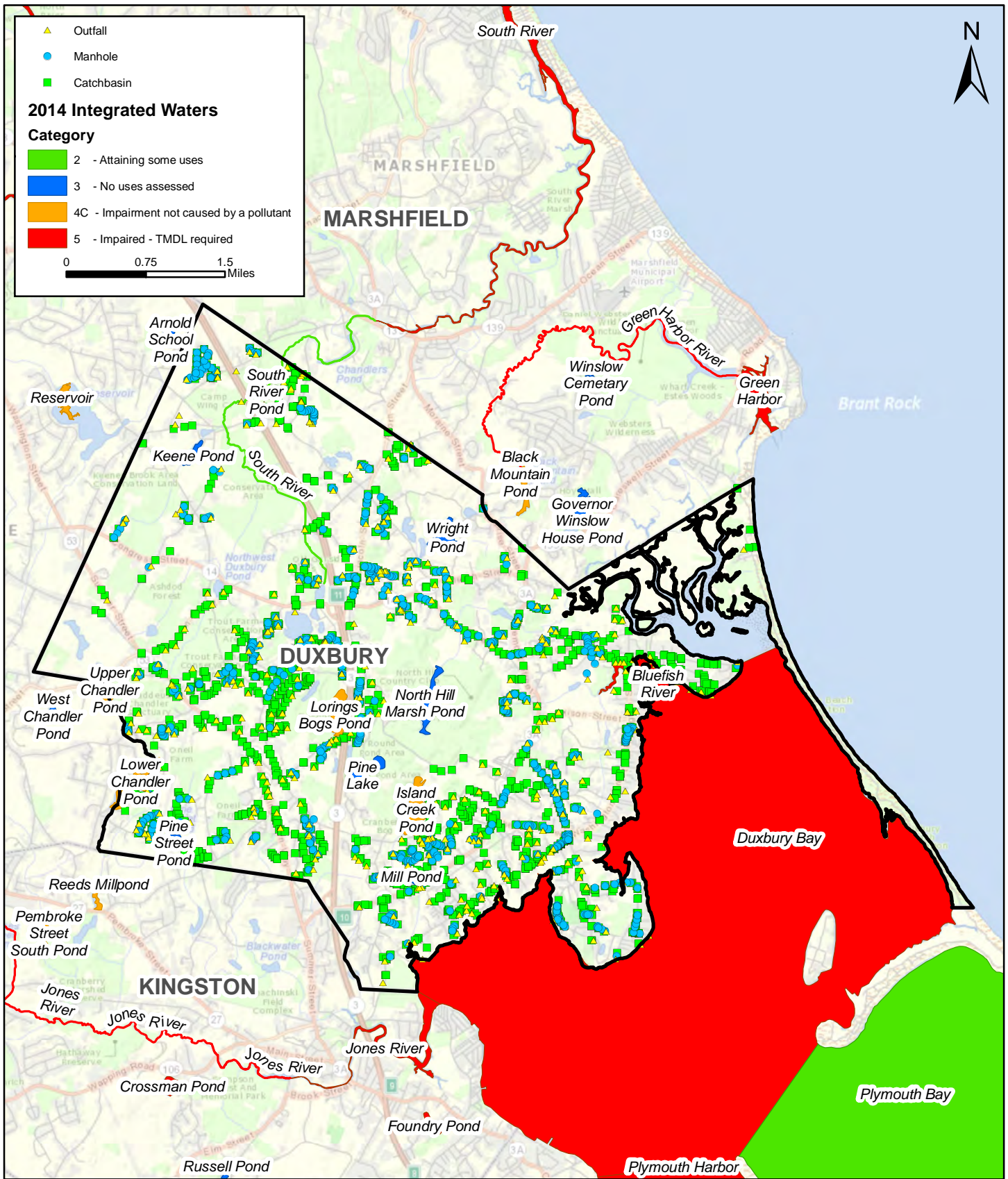


Figure 3
Stormwater System
Duxbury, Massachusetts



FIGURE 4

STORMWATER SYSTEM MAP

APPENDIX A

MA MS4 Y ERLIN SANDRE EREN ES

MA MS4 General Permit Hyperlinks

EPA MA MS4 Permit: <https://www.epa.gov/npdes-permits/massachusetts-small-ms4-general-permit>

DEP Permit Information:

<http://www.mass.gov/eea/agencies/massdep/water/wastewater/stormwater.html#8>

Town Hyperlink: https://www.kingstonmass.org/index.asp?SEC=98244A4B-6C67-49DB-8F75-2428CB6987B9&Type=B_BASIC

MCM 1: Public Education and Outreach

EPA's Stormwater Education Toolbox

MassDEP's Stormwater Outreach Materials

Other templates relevant to MCM 1 can be found here:

<https://www.epa.gov/npdes-permits/stormwater-tools-new-england#peo>

MCM 3: Illicit Discharge Detection and Elimination (IDDE) Program

IDDE Program Template and SOPs

Other templates relevant to IDDE can be found here:

<https://www.epa.gov/npdes-permits/stormwater-tools-new-england#idde>

MCM 4: Construction Site Stormwater Runoff Control

Examples and templates relevant to MCM 4, including model ordinances and site inspection templates, can be found here:

<https://www.epa.gov/npdespermits/stormwater-tools-new-england#csrc>

MCM 5: Post Construction Stormwater Management in New Development and Redevelopment

Examples and templates relevant to MCM 5, including model ordinances and bylaw review templates and guidance can be found here:

<https://www.epa.gov/npdes-permits/stormwater-tools-new-england#pcsm>

MCM 6: Good Housekeeping and Pollution Prevention for Permittee Owned Operations

Examples and templates relevant to MCM 6, including SOP templates for catch basin cleaning, street sweeping, vehicle maintenance, parks and open space management, winter deicing, and Stormwater Pollution Prevention Plans can be found here:

<https://www.epa.gov/npdes-permits/stormwatertools-new-england#gh>

APPENDIX B
NOTI E O INTENT

Part I: General Conditions

General Information

Name of Municipality or Organization: State:

EPA NPDES Permit Number (if applicable):

Primary MS4 Program Manager Contact Information

Name: Title:

Street Address Line 1:

Street Address Line 2:

City: State: Zip Code:

Email: Phone Number:

Fax Number:

Other Information

Stormwater Management Program (SWMP) Location (web address or physical location, if already completed):

Eligibility Determination

Endangered Species Act (ESA) Determination Complete? Eligibility Criteria (check all that apply): A B C

National Historic Preservation Act (NHPA) Determination Complete? Eligibility Criteria (check all that apply): A B C

Check the box if your municipality or organization was covered under the 2003 MS4 General Permit

MS4 Infrastructure (if covered under the 2003 permit)

Estimated Percent of Outfall Map Complete? if 100% of 2003 requirements not met, enter an estimated date of completion (MM/DD/YY):

Web address where MS4 map is published:
If outfall map is unavailable on the internet an electronic or paper copy of the outfall map must be included with NOI submission (see section V for submission options)

Regulatory Authorities (if covered under the 2003 permit)

Illicit Discharge Detection and Elimination (IDDE) Authority Adopted? <small>(Part II, III, IV or V, Subpart B.3.(a.) of 2003 permit)</small>	<input type="text" value="No"/>	Effective Date or Estimated Date of Adoption (MM/DD/YY):	<input type="text" value="04/30/19"/>
Construction/Erosion and Sediment Control (ESC) Authority Adopted? <small>(Part II,III,IV or V, Subpart B.4.(a.) of 2003 permit)</small>	<input type="text" value="Yes"/>	Effective Date or Estimated Date of Adoption (MM/DD/YY):	<input type="text" value="04/28/04"/>
Post- Construction Stormwater Management Adopted? <small>(Part II, III, IV or V, Subpart B.5.(a.) of 2003 permit)</small>	<input type="text" value="No"/>	Effective Date or Estimated Date of Adoption (MM/DD/YY):	<input type="text" value="04/30/19"/>

Waterbody that receives flow from the MS4 and segment ID if applicable	Number of outfalls into receiving water segment	Chloride	Chlorophyll-a	Dissolved Oxygen/DO Saturation	Nitrogen	Oil & Grease/ PAH	Phosphorus	Solids/ TSS/ Turbidity	E. coli	Enterococcus	Other pollutant(s) causing impairments
Unnamed Stream (42.028189, -70.705795)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Unnamed Stream (42.037432, -70.725774)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Unnamed Stream (42.038993, -70.762297)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Unnamed Stream (42.040671, -70.737423)	3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Unnamed Stream (42.042048, -70.690598)	2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Unnamed Stream (42.050909, -70.727442)	2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Unnamed Stream (42.052354, -70.752497)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Unnamed Stream (42.056068, -70.715331)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Unnamed Stream (42.061577, -70.710605)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Unnamed Stream (42.067622, -70.715866)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Unnamed Stream (42.077267, -70.708458)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Unnamed Stream (42.088364, -70.729978)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Unnamed Waterbody (42.030228, -70.737484)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Unnamed Waterbody (42.031033, -70.733933)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Unnamed Waterbody (42.035051, -70.676098)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Unnamed Waterbody (42.041903, -70.721865)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Unnamed Waterbody (42.042124, -70.7166)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Unnamed Waterbody (42.044671, -70.693901)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Waterbody that receives flow from the MS4 and segment ID if applicable	Number of outfalls into receiving water segment	Chloride	Chlorophyll-a	Dissolved Oxygen/DO Saturation	Nitrogen	Oil & Grease/ PAH	Phosphorus	Solids/ TSS/ Turbidity	E. coli	Enterococcus	Other pollutant(s) causing impairments
Unnamed Waterbody (42.056088, -70.70456)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Unnamed Waterbody (42.056296, -70.707584)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Unnamed Waterbody (42.060363, -70.705422)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Unnamed Waterbody (42.066453, -70.719355)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Town of Duxbury

Waterbody that receives flow from the MS4 and segment ID if applicable	Number of outfalls into receiving water segment	Chloride	Chlorophyll-a	Dissolved Oxygen/DO Saturation	Nitrogen	Oil & Grease/ PAH	Phosphorus	Solids/ TSS/ Turbidity	E. coli	Enterococcus	Other pollutant(s) causing impairments
Unnamed Wetland (42.008175, -70.70953)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Unnamed Wetland (42.018946, -70.687297)	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Unnamed Wetland (42.019121, -70.720865)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Unnamed Wetland (42.019397, -70.723378)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Unnamed Wetland (42.019743, -70.728365)	2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Unnamed Wetland (42.020148, -70.752811)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Unnamed Wetland (42.020455, -70.753556)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Unnamed Wetland (42.02133, -70.709701)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Unnamed Wetland (42.023313, -70.706913)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Unnamed Wetland (42.024529, -70.714872)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Unnamed Wetland (42.028695, -70.752945)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Unnamed Wetland (42.029793, -70.671078)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Unnamed Wetland (42.040531, -70.74168)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Unnamed Wetland (42.043301, -70.678268)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Waterbody that receives flow from the MS4 and segment ID if applicable											
Unnamed Wetland (42.044267, -70.763566)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Unnamed Wetland (42.044962, -70.756132)	2	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Unnamed Wetland (42.048033, -70.668327)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Unnamed Wetland (42.049425, -70.703902)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Unnamed Wetland (42.049452, -70.71688)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Unnamed Wetland (42.052161, -70.688085)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Unnamed Wetland (42.053514, -70.712909)	3	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Unnamed Wetland (42.055888, -70.687047)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Unnamed Wetland (42.058588, -70.733269)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Unnamed Wetland (42.059527, -70.710914)	4	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Unnamed Wetland (42.061624, -70.733822)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Unnamed Wetland (42.061736, -70.730145)	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Notice of Intent (NOI) for coverage under Small MS4 General Permit

Part III: Stormwater Management Program Summary

Identify the Best Management Practices (BMPs) that will be employed to address each of the six Minimum Control Measures (MCMs). For municipalities/organizations whose MS4 discharges into a receiving water with an approved Total Maximum Daily Load (TMDL) and an applicable waste load allocation (WLA), identify any additional BMPs employed to specifically support the achievement of the WLA in the TMDL section at the end of part III.

For each MCM, list each existing or proposed BMP by category and provide a brief description, responsible parties/departments, measurable goals, and the year the BMP will be employed (public education and outreach BMPs also requires a target audience). **Use the drop-down menus in each table or enter your own text to override the drop down menu.**

MCM 1: Public Education and Outreach

BMP Media/Category (enter your own text to override the drop down menu)	BMP Description	Targeted Audience	Responsible Department/Parties (enter your own text to override the drop down menu)	Measurable Goal	Beginning Year of BMP Implementation
Brochures/Pamphlets	Publish outreach materials; Distribute new resident packets to residents within Wetland Protection Areas.	Residents	DPW, NSRWA	Distribute at least two educational messages within the permit term (5 years)	2018
Brochures/Pamphlets	Include information in permit materials.	Businesses, Institutions and Commercial Facilities	DPW, NSRWA	Distribute at least two educational messages within the permit term (5 years)	2018
Brochures/Pamphlets	Include information in permit materials; Review and Update application forms to meet the new requirements.	Developers (construction)	DPW, NSRWA	Distribute at least two educational messages within the permit term (5 years)	2018
Brochures/Pamphlets	Distribute information to industrial groups based on zoning and property use.	Industrial Facilities	DPW, NSRWA	Distribute at least two educational messages within the permit term (5 years)	2018
Web Page	Develop/maintain stormwater website and/or utilize Town social media for outreach. Provide specific information directed towards residences.	Residents	DPW, NSRWA	Post at least two educational messages within the permit term (5 years)	2018

Town of Duxbury

Web Page	Develop/maintain stormwater website and/or utilize Town social media for outreach. Provide specific information directed towards businesses, institutions, and commercial facilities	Businesses, Institutions and Commercial Facilities	DPW, NSRWA	Post at least two educational messages within the permit term (5 years)	2018
Web Page	Develop/maintain stormwater website and/or utilize Town social media for outreach. Provide specific information directed towards developers	Developers (construction)	DPW, NSRWA	Post at least two educational messages within the permit term (5 years)	2018
Web Page	Develop/maintain stormwater website and/or utilize Town social media for outreach. Provide specific information directed towards industrial facilities	Industrial Facilities	DPW, NSRWA	Post at least two educational messages within the permit term (5 years)	2018
School Curricula/Programs	"Water All Around You" school educational program	Residents	DPW, NSRWA	Annual school participation of program	2018
Brochures/Pamphlets	Distribute pet waste control information to residents when they (re)apply for a pet license.	Residents	DPW, NSRWA	Distribute at least two educational messages within the permit term (5 years)	2018
Brochures/Pamphlets	Distribute information to septic maintenance contractors.	Contractors	DPW, NSRWA	Distribute at least two educational messages within the permit term (5 years)	2018

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Part III: Stormwater Management Program Summary (continued)

MCM 2: Public Involvement and Participation

BMP Categorization	Brief BMP Description (enter your own text to override the drop down menu)	Responsible Department/Parties (enter your own text to override the drop down menu)	Additional Description/ Measurable Goal	Beginning Year of BMP Imple- mentation
Public Review	SWMP Review	Planning Department	Allow annual review of stormwater management plan and posting of stormwater management plan on website	2018
Public Participation	SWMP Review	Planning Department	Allow public to comment on stormwater management plan annually	2018
Public Participation	Beach Cleanup/Litter Sweep	DPW, Citizen Groups	Continued support of "Duxbury Litter Sweep" community group and coordinating Town-wide cleanup effort	2018
Public Participation	Household hazardous waste/used oil collection	DPW Operations	Continue to sponsor Paint and HHW collections four times per year	2018

Notice of Intent (NOI) for coverage under Small MS4 General Permit

Part III: Stormwater Management Program Summary (continued)

MCM 3: Illicit Discharge Detection and Elimination (IDDE)

BMP Categorization (enter your own text to override the drop down menu)	BMP Description	Responsible Department/Parties (enter your own text to override the drop down menu)	Measurable Goal (all text can be overwritten)	Beginning Year of BMP Implementation
SSO inventory	Develop SSO inventory in accordance of permit conditions	DPW Operations	Complete within 1 year of effective date of permit	2018
Storm sewer system map	Create map and update during IDDE program completion	DPW Operations	Update map within 2 years of effective date of permit and complete full system map 10 years after effective date of permit	2018
Written IDDE program	Create written IDDE program	DPW Operations	Complete within 1 year of the effective date of permit and update as required	2018
Implement IDDE program	Implement catchment investigations according to program and permit conditions	DPW Operations	Complete 10 years after effective date of permit	2018
Employee training	Train employees on IDDE implementation	DPW Operations	Train annually	2018
Conduct dry weather screening	Conduct in accordance with outfall screening procedure and permit conditions	DPW Operations	Complete 3 years after effective date of permit	2018
Conduct wet weather screening	Conduct in accordance with outfall screening procedure	DPW Operations	Complete 10 years after effective date of permit	2018
Ongoing screening	Conduct dry weather and wet weather screening (as necessary)	DPW Operations	Complete ongoing outfall screening upon completion of IDDE program	2018

Notice of Intent (NOI) for coverage under Small MS4 General Permit

Part III: Stormwater Management Program Summary *(continued)*

MCM 4: Construction Site Stormwater Runoff Control

BMP Categorization (enter your own text to override the drop down menu or entered text)	BMP Description	Responsible Department/Parties (enter your own text to override the drop down menu)	Measurable Goal (all text can be over/ritten)	Beginning Year of BMP Implementation
Site inspection and enforcement of Erosion and Sediment Control (ESC) measures	Complete written procedures of site inspections and enforcement procedures	DPW/Planning/Building/Conservation	Complete within 1 year of the effective date of permit	2018
Site plan review	Complete written procedures of site plan review and begin implementation	DPW/Planning/Building/Conservation	Complete within 1 year of the effective date of permit	2018
Erosion and Sediment Control	Adoption of requirements for construction operators to implement a sediment and erosion control program	DPW/Planning/Building/Conservation	Complete within 1 year of the effective date of permit	2018
Waste Control	Adoption of requirements to control wastes, including but not limited to, discarded building materials, concrete truck wash out, chemicals, litter, and sanitary wastes	DPW/Planning/Building/Conservation	Complete within 1 year of the effective date of permit	2018

Notice of Intent (NOI) for coverage under Small MS4 General Permit

Part III: Stormwater Management Program Summary (continued)

MCM 5: Post-Construction Stormwater Management in New Development and Redevelopment

BMP Categorization (enter your own text to override the drop down menu or entered text)	BMP Description	Responsible Department/Parties (enter your own text to override the drop down menu)	Measurable Goal (all text can be overwritten)	Beginning Year of BMP Implementation
As-built plans for on-site stormwater control	The procedures to require submission of as-built drawings and ensure long term operation and maintenance will be a part of the SWMP	DPW/Planning/Building/Conservation	Require submission of as-built plans for completed projects	2019
Target properties to reduce impervious areas	Identify at least 5 permittee-owned properties that could be modified or retrofitted with BMPs to reduce impervious areas and update annually	Conservation Committee	Complete 4 years after effective date of permit and report annually on retrofitted properties	2020
Allow green infrastructure	Develop a report assessing existing local regulations to determine the feasibility of making green infrastructure practices allowable when appropriate site conditions exist	DPW/Planning/Building/Conservation	Complete 4 years after effective date of permit and implement recommendations of report	2020
Street design and parking lot guidelines	Develop a report assessing requirements that affect the creation of impervious cover. The assessment will help determine if changes to design standards for streets and parking lots can be modified to support low impact design options.	DPW/Planning/Building/Conservation	Complete 4 years after effective date of permit and implement recommendations of report	2020

Notice of Intent (NOI) for coverage under Small MS4 General Permit

Part III: Stormwater Management Program Summary (continued)

MCM 6: Municipal Good Housekeeping and Pollution Prevention

BMP Categorization (enter your own text to override the drop down menu or entered text)	BMP Description	Responsible Department/Parties (enter your own text to override the drop down menu)	Measurable Goal (all text can be overwritten)	Beginning Year of BMP Implementation
O&M procedures	Create written O&M procedures including all requirements contained in 2.3.7.a.ii for parks and open spaces, buildings and facilities, and vehicles and equipment	DPW Operations	Complete and implement 2 years after effective date of permit	2019
Inventory all permittee-owned parks and open spaces, buildings and facilities, and vehicles and equipment	Create inventory	DPW Operations	Complete 2 years after effective date of permit and implement annually	2019
Infrastructure O&M	Establish and implement program for repair and rehabilitation of MS4 infrastructure	DPW Operations	Complete 2 years after effective date of permit	2018
Stormwater Pollution Prevention Plan (SWPPP)	Create SWPPPs for maintenance garages, transfer stations, and other waste-handling facilities	DPW Operations	Complete and implement 2 years after effective date of permit	2019
Catch basin cleaning	Establish schedule for catch basin cleaning such that each catch basin is no more than 50% full and clean catch basins on that schedule	DPW Operations	Clean catch basins on established schedule and report number of catch basins cleaned and volume of material moved annually	2018
Street sweeping program	Sweep all streets and permittee-owned parking lots in accordance with permit conditions	DPW Operations	Sweep all streets and permittee-owned parking lots once per year in the spring	2018
Road salt use optimization program	Establish and implement a program to minimize the use of road salt	DPW Operations	Implement salt use optimization during deicing season	2018

Part IV: Notes and additional information

Use the space below to indicate the part(s) of 2.2.1 and 2.2.2 that you have identified as not applicable to your MS4 because you do not discharge to the impaired water body or a tributary to an impaired water body due to nitrogen or phosphorus. Provide all supporting documentation below or attach additional documents if necessary. Also, provide any additional information about your MS4 program below.

Attachments:

Figure - MS4 Outfalls

USFWS Correspondence

The outfalls included in Part II: Summary of Receiving Waters were selected based on a 100 foot distance from any waters of the U.S. Coordinates listed under unnamed water segments are based on the NAD 1983 State Plane Massachusetts FIPS 2001 (US Feet) Coordinate System, and are listed as latitude/longitude in decimal degrees.

Regarding the ESA section 7 consultation, I agree that the MS4 Permit will not adversely affect the Northern Long-eared Bat, Piping Plover, Red Knot, Roseate Tern, or the Plymouth Redbelly Turtle in the MS4 area.

Regarding the National Historic Preservation Act, under 36 CFR 800, this facility is an existing facility authorized by the previous Permit, and is not undertaking any activity involving subsurface land disturbance less than 1 acre. This MS4 Permit will have "no potential to cause effects," in accordance with 36 CFR 800.3(a)(1).

Notice of Intent (NOI) for coverage under Small MS4 General Permit

Part V: Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, I certify that the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Name:

Title:

Signature:

Date:

[To be signed according to Appendix B, Subparagraph B.11, Standard Conditions]

Note: When prompted during signing, save the document under a new file name

APPENDIX C
PERMIT SCHEDULE

**MS4 Permit
Draft Schedule
Town of Duxbury, Massachusetts**

July 2018 – MS4 Permit effective date to coincide with start of FY18

- **September 29, 2018** – Submit Updated NOI (within 90 days of effective date)

July 2019 – Items due within 1 year of effective date

- Submit Updated Stormwater Management Plan
- Additional Mapping – update stormwater system GIS for connectivity (as needed)
- Written IDDE Plan, identify catchments contributing to areas with Bacteria as High Priority
- Inventory Town Facilities
- Develop O&M for Town Facilities
- Education/Outreach – Two educational messages to each of the 4 audiences over 5 years
- Additional Education/Outreach (*x2 for Impaired Water Requirements*)** - Bluefish River and Duxbury Bay
 - Bacteria and Pathogens: Targeting Dog Waste / Septic Systems
- Public Participation
- Annual Training

July 2020 – Items due within 2 years of effective date

- SWPPP for Appropriate Facilities
- SPCC Plan where appropriate
- Parks Maintenance Plan
- Ongoing Outfall Sampling (wet & dry) / Inspections / Update Mapping
- Education/Outreach – Two educational messages to each of the 4 audiences over 5 years
- Additional Education & Outreach (*x2 for Impaired Water Requirements*)**
 - Bacteria: Targeting Dog Waste / Septic Systems for – Bluefish River and Duxbury Bay
- Public Participation
- Annual Training

July 2021 – Items due within 3 years of effective date

- Revisions to Stormwater Bylaw - Construction Site Stormwater Runoff Control
- Draft regulations to promote green infrastructure – Post-Construction Management
- Ongoing Outfall Sampling (wet & dry) / Inspections / Update Mapping
- Education/Outreach – Two educational messages to each of the 4 audiences over 5 years
- Additional Education & Outreach (*x2 for Impaired Water Requirements*)**
 - Bacteria: Targeting Dog Waste / Septic Systems for – Bluefish River and Duxbury Bay
- Public Participation



- Annual Training

July 2022 – Items due within 4 years of effective date

- Revisions to Stormwater Bylaw - Construction Site Stormwater Runoff Control
- Draft regulations to reduce impervious cover – Post-Construction Management
- Ongoing Outfall Sampling (wet & dry) / Inspections / Update Mapping
- Education/Outreach – Two educational messages to each of the 4 audiences over 5 years
- Additional Education & Outreach (x2 for Impaired Water Requirements)*
 - Bacteria: Targeting Dog Waste / Septic Systems for – Bluefish River and Duxbury Bay
- Public Participation
- Annual Training

July 2023 – Permit Length (5 years)

- Inventory/Priority Ranking of LID retrofits on Town-Owned Property – Post-Construction Management
- System development for tracking Impervious Area – Post-Construction Management
- Ongoing Outfall Sampling (wet & dry) / Inspections / Update Mapping
- Education/Outreach – Two educational messages to each of the 4 audiences over 5 years
- Additional Education & Outreach (x2 for Impaired Water Requirements)**
 - Bacteria: Targeting Dog Waste / Septic Systems for – Bluefish River and Duxbury Bay
- Public Participation
- Annual Training

***Additional requirements for Water Quality Assessment are required due to documented bacteria and Pathogens in the Bluefish River and Duxbury Bay. (see Appendix H, section III and Appendix F, section A, Part III.)*



APPENDIX D

ENDANGERED SPECIES AND CRITICAL HABITATS PROTECTION DOCUMENTS



United States Department of the Interior



FISH AND WILDLIFE SERVICE

New England Field Office
70 Commercial St, Suite 300
Concord, NH 03301-5087
<http://www.fws.gov/newengland>

September 24, 2018

To whom it may concern:

The U.S. Fish and Wildlife Service (USFWS) reviewed the stormwater discharge activities associated with the 2016 National Pollutant Discharge and Elimination System (NPDES) Massachusetts (MA) Small Municipal Separate Storm Sewer System (MS4) general permit (MA MS4 General Permit) issued by the Environmental Protection Agency (EPA). We determined those activities may affect, but are not likely to adversely affect, certain species listed under the Endangered Species Act (ESA) of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*) when specific conditions are met. When these conditions are met, we do not need to review individual projects. These comments are provided in accordance with section 7 of the ESA and complement existing 2016 MA MS4 General Permit Appendix C Guidance. We understand the applicant is acting as a non-Federal representative of the EPA for the purpose of consultation under section 7. **This letter provides additional guidance for meeting Criterion B and should be submitted as part of your application package to the EPA.**

If the USFWS Information for Planning and Consultation website (<https://ecos.fws.gov/ipac/>) indicates your MA MS4 General Permit project action area may contain one or more of the following federally listed endangered species: roseate tern (*Sterna dougallii*), northern red-bellied cooter (*Pseudemys rubriventris*), dwarf wedgemussel (*Alasmidonta heterodon*), rusty patched bumble bee (*Bombus affinis*), northeastern bulrush (*Scirpus ancistrochaetus*), or American chaffseed (*Schwalbea americana*); threatened species: piping plover (*Charadrius melodus*), bog turtle (*Glyptemys muhlenbergii*), Puritan tiger beetle (*Cicindela puritana*), northeastern beach tiger beetle (*Cicindela dorsalis*), or red knot (*Calidris canutus rufa*); or their federally designated critical habitat; and the specific conditions listed below are met, you may submit this letter to complete the **MA MS4 General Permit Appendix C: Step 4** in place of a concurrence letter for informal consultation as documentation of ESA eligibility for **USFWS Criterion B**.

In addition, this letter also satisfies the requirement in the **MA MS4 General Permit Appendix C: Step 2 (3)** to contact the USFWS and obtain a concurrence letter, if you have not yet done so. If your project action area includes one or more of the above-listed species *and* one or more of the

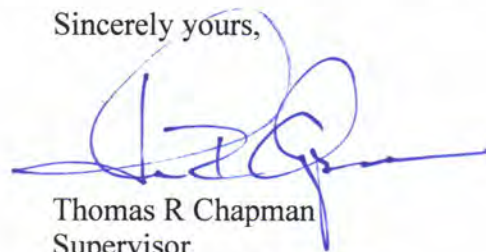
species listed under **Criterion C**,¹ you may still use this letter to certify under **Criterion B**. All existing guidance regarding requirements for certifying eligibility according to the USFWS Criterion A, B, or C for coverage by the 2016 MS4 Permit (see MA MS4 General Permit Appendix C – Endangered Species Guidance) remains unchanged.

We have determined that proposed stormwater discharge activities covered under the 2016 MS4 Permit *may affect, but are not likely to adversely affect*, the above-listed species and the species' critical habitat when the following are true:

1. all stormwater discharges are pre-existing or previously permitted by EPA;
2. any planned operations and maintenance work covered by this permit will only affect previously disturbed areas where stormwater controls are already installed. In these situations the chance of encountering any of the subject species is discountable;
3. the project implements EPA MS4 Best Management Practices (BMPs) and meets Clean Water Act and Massachusetts Water Quality Standards. Although permitted discharges may reach the environment used by these species, BMPs reduce pollutants to the extent that discharges are not known to have measurable impacts on these species or their habitat;
4. no new construction or structural BMPs are proposed under this permit at this time; and
5. you agree that if, during the course of the permit term, you plan to install a structural BMP not identified in the Notice of Intent (NOI), you will re-initiate consultation with the USFWS as necessary (see **MA MS4 General Permit Appendix C: Step 2 (5)**).

If the above criteria are met, further consultation with the USFWS under section 7 of the ESA is not required at this time; however, if the proposed action changes in any way such that it may affect a listed species in a manner not previously analyzed or if new information reveals the presence of additional listed species that may be affected by the project, the applicant or the EPA should contact us immediately and suspend activities that may affect those species until the appropriate level of consultation is completed with our office. Thank you for your cooperation, and please contact David Simmons of this office at (603) 227-6425 if you have questions or need further assistance.

Sincerely yours,



Thomas R Chapman
Supervisor
New England Field Office

¹ Criterion C includes guidance for project action areas that may contain species for which EPA has already made a determination. These species include the northern long-eared bat (*Myotis septentrionalis*), sandplain gerardia (*Agalinis acuta*), small whorled pogonia (*Isotria medeoloides*), and/or American burying beetle (*Nicrophorus americanus*) (MA MS4 General Permit Appendix C: Step 3 – Determine if You Can Meet Eligibility USFWS Criterion C).



United States Department of the Interior



FISH AND WILDLIFE SERVICE
New England Ecological Services Field Office
70 Commercial Street, Suite 300
Concord, NH 03301-5094
Phone: (603) 223-2541 Fax: (603) 223-0104
<http://www.fws.gov/newengland>

In Reply Refer To:
Consultation Code: 05E1NE00-2018-SLI-2414
Event Code: 05E1NE00-2018-E-07555
Project Name: Duxbury MS4

September 27, 2018

Subject: Updated list of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
-

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

New England Ecological Services Field Office

70 Commercial Street, Suite 300

Concord, NH 03301-5094

(603) 223-2541

Project Summary

Consultation Code: 05E1NE00-2018-SLI-2414

Event Code: 05E1NE00-2018-E-07555

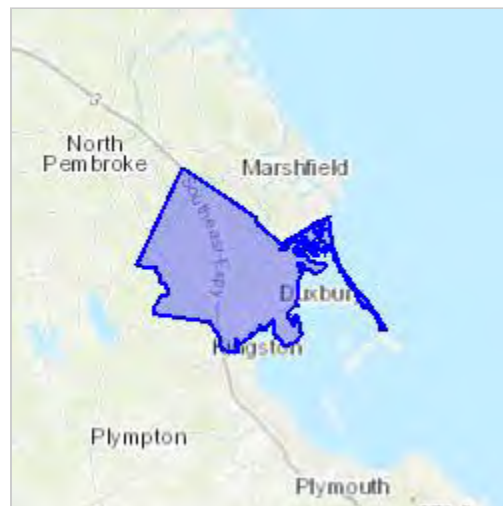
Project Name: Duxbury MS4

Project Type: ** OTHER **

Project Description: Stormwater MS4

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/42.04968977643085N70.72104515160825W>



Counties: Plymouth, MA

Endangered Species Act Species

There is a total of 5 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Birds

NAME	STATUS
Piping Plover <i>Charadrius melodus</i> Population: [Atlantic Coast and Northern Great Plains populations] - Wherever found, except those areas where listed as endangered. There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6039	Threatened
Red Knot <i>Calidris canutus rufa</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/1864	Threatened
Roseate Tern <i>Sterna dougallii dougallii</i> Population: northeast U.S. nesting pop. No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/2083	Endangered

Reptiles

NAME	STATUS
Plymouth Redbelly Turtle <i>Pseudemys rubriventris bangsi</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/451	Endangered

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

APPENDIX E

A S GENERAL ER IT A ENDI D HISTORIC PROPERTIES DOCUMENTS

Appendix D National Historic Preservation Act Guidance

Background

Section 106 of the National Historic Preservation Act (NHPA) requires federal agencies to take into account the effects of Federal “undertakings” on historic properties that are either listed on, or eligible for listing on, the National Register of Historic Places. The term federal “undertaking” is defined in the NHPA regulations to include a project, activity, or program of a federal agency including those carried out by or on behalf of a federal agency, those carried out with federal financial assistance, and those requiring a federal permit, license or approval. See 36 CFR 800.16(y). Historic properties are defined in the NHPA regulations to include prehistoric or historic districts, sites, buildings, structures, or objects that are included in, or are eligible for inclusion in, the National Register of Historic Places. This term includes artifacts, records, and remains that are related to and located within such properties. See 36 CFR 800.16(1).

EPA’s issuance of a National Pollutant Discharge Elimination System (NPDES) General Permit is a federal undertaking within the meaning of the NHPA regulations and EPA has determined that the activities to be carried out under the general permit require review and consideration, in order to be in compliance with the federal historic preservation laws and regulations. Although individual submissions for authorization under the general permit do not constitute separate federal undertakings, the screening processes provides an appropriate site-specific means of addressing historic property issues in connection with EPA’s issuance of the permit. To address any issues relating to historic properties in connection with the issuance of this permit, EPA has included a screening process for applicants to identify whether properties listed or eligible for listing on the National Register of Historic Places are within the path of their discharges or discharge-related activities (including treatment systems or any BMPs relating to the discharge or treatment process) covered by this permit.

Applicants seeking authorization under this general permit must comply with applicable, State, Tribal, and local laws concerning the protection of historic properties and places and may be required to coordinate with the State Historic Preservation Officer (SHPO) and/or Tribal Historic Preservation Officer (THPO) and others regarding effects of their discharges on historic properties.

Activities with No Potential to Have an Effect on Historic Properties

A determination that a federal undertaking has no potential to have an effect on historic properties fulfills an agency’s obligations under NHPA. EPA has reason to believe that the vast majority of activities authorized under this general permit will have no potential effects on historic properties. This permit typically authorizes discharges from existing facilities and requires control of the pollutants discharged from the facility. EPA does not anticipate effects on historic properties from the pollutants in the authorized discharges. Thus, to the extent EPA’s issuance of this general permit authorizes discharges of such constituents, confined to existing channels, outfalls or natural drainage areas, the permitting action does not have the potential to cause effects on historical properties.

In addition, the overwhelming majority of sources covered under this permit will be facilities that are seeking renewal of previous permit authorization. These existing dischargers should have already addressed NHPA issues in the previous general permit as they were required to certify that they were either not affecting historic properties or they had obtained written agreement from

the applicable SHPO or THPO regarding methods of mitigating potential impacts. To the extent this permit authorizes renewal of prior coverage without relevant changes in operations the discharge has no potential to have an effect on historic properties.

Activities with Potential to Have an Effect on Historic Properties

EPA believes this permit may have some potential to have an effect on historic properties the applicant undertakes the construction and/or installation of control measures that involve subsurface disturbance that involves less than 1 acre of land. (Ground disturbances of 1 acre or more require coverage under the Construction General Permit.) Where there is disturbance of land through the construction and/or installation of control measures, there is a possibility that artifacts, records, or remains associated with historic properties could be impacted. Therefore, if the applicant is establishing new or altering existing control measures to manage their discharge that will involve subsurface ground disturbance of less than 1 acre, they will need to ensure (1) that historic properties will not be impacted by their activities or (2) that they are in compliance with a written agreement with the SHPO, THPO, or other tribal representative that outlines all measures the applicant will carry out to mitigate or prevent any adverse effects on historic properties.

Examples of Control Measures Which Involve Subsurface Disturbance

The type of control measures that are presumptively expected to cause subsurface ground disturbance include:

- Dikes
- Berms
- Catch basins, drainage inlets
- Ponds, bioretention areas
- Ditches, trenches, channels, swales
- Culverts, pipes
- Land manipulation; contouring, sloping, and grading
- Perimeter Drains
- Installation of manufactured treatment devices

EPA cautions applicants that this list is non-inclusive. Other control measures that involve earth disturbing activities that are not on this list must also be examined for the potential to affect historic properties.

Certification

Upon completion of this screening process the applicant shall certify eligibility for this permit using one of the following criteria on their Notice of Intent for permit coverage:

Criterion A: The discharges do not have the potential to cause effects on historic properties.

Criterion B: A historic survey was conducted. The survey concluded that no historic properties are present. Discharges do not have the potential to cause effects on historic properties.

Criterion C: The discharges and discharge related activities have the potential to have an effect on historic properties, and the applicant has obtained and is in compliance with a written agreement with the State Historic Preservation Officer (SHPO), Tribal Historic Preservation Officer (THPO), or other tribal representative that outlines measures the applicant will carry out to mitigate or prevent any adverse effects on historic properties.

Authorization under the general permit is available only if the applicant certifies and documents permit eligibility using one of the eligibility criteria listed above. Small MS4s that cannot meet any of the eligibility criteria in above must apply for an individual permit.

Screening Process

Applicants or their consultant need to answer the questions and follow the appropriate procedures below to assist EPA in compliance with 36 CFR 800.

Question 1: Is the facility an existing facility authorized by the previous permit or a new facility and the applicant is not undertaking any activity involving subsurface land disturbance less than an acre?

YES - The applicant should certify that fact in writing and file the statement with the EPA. This certification must be maintained as part of the records associated with the permit.

The applicant should certify eligibility for this permit using Criterion A on their Notice of Intent for permit coverage. The applicant does not need to contact the state Historic Commission. Based on that statement, EPA will document that the project has "no potential to cause effects" (36 CFR 800.3(a)(1)). There are no further obligations under the Section 106 regulations.

NO- Go to Question 2.

Question 2: Is the property listed in the National Register of Historic Places or have prior surveys or disturbances revealed the existence of a historic property or artifacts?

NO - The applicant should certify that fact in writing and file the statement with the EPA. This certification must be maintained as part of the records associated with the permit.

The applicant should certify eligibility for this permit using Criterion B on their Notice of Intent for permit coverage. The applicant does not need to contact the state Historic Commission. Based on that statement, EPA will document that the project has "no potential to cause effects" (36 CFR 800.3(a)(1)). There are no further obligations under the Section 106 regulations.

YES - The applicant or their consultant should prepare a complete information submittal to the SHPO. The submittal consists of:

- Completed Project Notification Form- forms available at <http://www.sec.state.ma.us/mhc/mhcform/formidx.htm>;

- USGS map section with the actual project boundaries clearly indicated; and
- Scaled project plans showing existing and proposed conditions.

(1) Please note that the SHPO does not accept email for review. Please mail a paper copy of your submittal (Certified Mail, Return Receipt Requested) or deliver a paper copy of your submittal (and obtain a receipt) to:

State Historic Preservation Officer
Massachusetts Historical Commission
220 Morrissey Blvd.
Boston MA 02125.

(2) Provide a copy of your submittal and the proof of MHC delivery showing the date MHC received your submittal to:

NPDES Permit Branch Chief
US EPA Region 1 (OEP06-1)
5 Post Office Square, Suite 100
Boston MA 02109-3912.

The SHPO will comment within thirty (30) days of receipt of complete submittals, and may ask for additional information. Consultation, as appropriate, will include EPA, the SHPO and other consulting parties (which includes the applicant). The steps in the federal regulations (36 CFR 800.2 to 800.6, etc.) will proceed as necessary to conclude the Section 106 review for the undertaking. **The applicant should certify eligibility for this permit using Criterion C on their Notice of Intent for permit coverage.**

APPENDIX F
NEW OR INCREASED DISCHARGES

New or Increased Discharges

Duxbury, MA

Location	Description	Proposed Use	Area	Contributing Area to MS4	BMP
**Harwood Rd	Housing Community	Residence	27 acres	27 acres	Stormceptor unit and detention pond

** Example of what would be written for a new or increased discharge

APPENDIX G
SSO INVENTORY

Sanitary Sewer Overflow (SSO) Inventory

Duxbury, MA

Location	Discharge Location	Is Discharge Entering MS4? (Y/N)	Date/Time of SSO Occurance	Estimated Volume of SSO Occurance	Known/Suspected Cause	Mitigation Measures Completed	Mitigation Implementation Date	Mitigation Measures Planned	Mitigation Implementation Schedule
1 Example Rd	Enters into Example Pond	Yes	August 4, 2016 9:00 AM - August 5, 2016 3:00 PM	1,200 gallons	Illicit resident connection	Illicit connection removed	August 8, 2016		

*The SSO occurrence listed above is an example

APPENDIX H

CURRENT STORMWATER BYLAWS AND REGULATIONS

ZONING BYLAWS



**Town of Duxbury
Massachusetts**

**AMENDED THROUGH
September Special TM 2018**

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PROTECTIVE BYLAW OF THE TOWN OF DUXBURY

ARTICLE 100 – GENERAL

101 TITLE

This Bylaw shall be known and may be cited as the Protective Bylaw of the Town of Duxbury, Massachusetts and is referred to herein as “this Bylaw.”

102 AUTHORITY

This Bylaw is adopted in accordance with and pursuant to the authority granted to the Town of Duxbury by General Laws, Chapter 40A as amended by Chapter 808 of the Acts of Massachusetts Legislature of 1975 as amended.

103 ESTABLISHMENT OF PRIOR RIGHTS

The provisions of this Bylaw shall not affect any one, any contract executed or liability incurred prior to its effective date, or any suit or prosecution pending or to be instituted to enforce any right, rule, regulation or Bylaw or to punish any offense under any prior Bylaw which may be modified or repealed by this Bylaw. All plans and permits legally approved and all applications and actions legally taken under the provisions of prior Zoning Bylaws and prior to the effective date of this Bylaw shall not be voided hereby and shall remain in full force and effect.

104 PURPOSE

This Bylaw is for the purpose of protecting the health, safety, convenience and general welfare of all inhabitants of the Town; to lessen the danger from fire, congestion and confusion; to control the impact future land development will have on the quantity and quality of the drinking water resources of the Town; to encourage housing for persons of all income levels; to encourage the most appropriate use of land throughout the Town; to further the goals of the 1969 Comprehensive Plan, the 1973 Comprehensive Statement, the 1999 Comprehensive Plan; and the Town Open Space Plan; and to improve and beautify the Town under and pursuant to the provisions of the Constitution and the General Laws. This Bylaw is further intended to reconcile man’s basic need and

desire for adequate shelter and support facilities associated with contemporary living with the preservation of natural resources and historic and natural features. It is also the purpose of this Bylaw to utilize, to the maximum extent possible, the powers granted to the Town so as to:

104.1 Protect the Town's significant environmental and historic features such as: salt marshes, wetlands, brooks, ponds, water resources, municipal facilities, historic areas, natural features, and to provide within this Bylaw methods to minimize the impact of developments;

104.2 Apply standards to measure and evaluate the capability of individual sites to support proposed developments;

104.3 Adopt standards to measure, evaluate and control the impact which future land development will have on the Town's natural resources, municipal facilities, historic areas, natural features, and to provide within this Bylaw methods to minimize the impact of developments;

104.4 Develop rational land development alternatives through an equitable and prescribed negotiation process to establish a balanced land use pattern responsive to individual site service capacities, planning standards and adjustable densities of land use and to provide reasonable community improvements consistent with the needs of the development of each site;

104.5 Establish within this Bylaw techniques to allow the Town to measure and evaluate economic impacts of future development on the Town's financial structure and to provide within this Bylaw methods to minimize adverse impacts by introducing varied land uses;

104.6 Further the conservation objectives of the Town as stated in the Comprehensive Statement and Plans;

104.7 Adopt regulations pursuant to these purposes that may include, but are not limited to, restricting, prohibiting, permitting or regulating the use, construction, alteration, height, area and location of buildings and structures and the use of land and premises in the Town.

ARTICLE 200 – ESTABLISHMENT OF DISTRICTS

201 CLASSES OF DISTRICTS

For the purpose of this Bylaw, the Town is hereby divided into the following classes of districts to be known as:

FHAOD	Flood Hazard Areas Overlay District
DP	Dunes Protection District
WP	Wetlands Protection Overlay District *
POL	Publicly-Owned Land Overlay District
APOD	Aquifer Protection Overlay District
RC	Residential Compatibility District
NB-L	Neighborhood Business Light District
NB-1	Neighborhood Business District 1
NB-2	Neighborhood Business District 2
PD-1	Planned Development District 1
PD-2	Planned Development District 2
PD-3	Planned Development District 3
WSA	Waterfront Scenic Overlay District
GMSP	Ground-Mounted Solar Photovoltaic Installations Overlay District

*The Wetlands Protection Overlay District as referred to in this Bylaw is the district identified on the "Wetlands and Watershed Protection District Map dated March 4, 1971."

202 LOCATION OF DISTRICTS

202.1 Zoning Map

Said districts are located and bounded as delineated on the "Town of Duxbury, Massachusetts Zoning Map" dated March 2009 as created by Greatwall GIS Services consisting of seven (7) sheets in total as revised and amended to date and on file in the office of the Town Clerk including the Wetland and Watershed Protection District Map dated March 4, 1971, as revised and amended to date and on file in the office of Town Clerk, and an Aquifer Protection District Map, dated January 15, 1986, as revised and amended March 24, 1993 and December 4, 2002 on file in the office of Town Clerk, and the Plymouth County Flood Insurance Rate Map dated November 4, 2016, and the Ground-Mounted Solar Photovoltaic Installations Overlay District Map dated March 11, 2017, and on file in the office of the Town Clerk. The zoning map with boundaries of the districts and all explanatory matter thereon is hereby made a part of this Bylaw. Any

conflict between the map and the description of any district in the written terms of this Bylaw shall be resolved according to the written terms.

202.2 District Boundary Line Descriptions

1. Where a district boundary line is shown as following a street, railroad or utility, the boundary shall be the centerline thereof as said line existed at the date of the zoning map unless otherwise indicated.
2. Where a boundary line is shown outside of a street, railroad or utility and approximately parallel thereto, the boundary shall be deemed parallel to the nearest line thereof, and the figure placed on the zoning map between the boundary and shall be the distance in feet between them, as measured at a right angle from such line unless otherwise indicated.
3. Where a boundary line is shown as following a watercourse, the boundary line shall coincide with the centerline thereof as said line existed at the date of the zoning map.
4. Where a boundary line shall include a numerical figure followed by the letter M.S.L., it is at that number of feet above Mean Sea Level. The basic source for determining such a line shall be the United States Geological Survey as interpreted by the Board of Selectmen or subsequent field surveys.
5. Where a boundary line is indicated as a property or lot line and the exact position of such line is not defined by measurements, the true location thereof shall be taken as the boundary line as said line existed at the date of the establishment of such boundary line.
6. Where the location of a boundary line is otherwise uncertain, the Zoning Enforcement Officer shall determine its position in accordance with the distance in feet from other lines or bounds as given or as measured on the zoning map and good engineering practice.
7. Where a boundary line other than a Wetlands Protection Overlay District boundary line divides a lot, a use permitted as a matter of right or by special permit in the less restricted district may be extended not more than thirty feet into the more restricted portion of the lot.
8. All land within twenty-five feet, measured horizontally, of the high water line of all waterbodies, the mean high tide line and the banks of all watercourses is within the Wetlands Protection District, unless specifically excluded. Where contours are used on the Wetlands and Watershed Protection Map as the boundaries of the district, their location on the ground shall be determined by their elevation based on the datum irrespective of their delineated location on the zoning map.

9. Boundaries of the Flood Hazard Areas Overlay District are shown and set forth in the Plymouth County Flood Insurance Rate Map (FIRM), on file in the Office of Town Clerk and in the Planning Board Office.

10. Boundaries of the Waterfront Scenic Area Overlay District are shown on a map entitled "Waterfront Scenic View Resource Areas" dated 2004 prepared by the Urban Harbors Institute and on file in the Office of Town Clerk and Planning Board Office.

11. Boundaries of the Ground-Mounted Solar Photovoltaic Installations Overlay District Map on file in the Office of Town Clerk and in the Planning Board Office.

12. Neighborhood Business Light District may only be located where the district is adjoining an existing NB-1 or NB-2 District through a common district boundary line.

ARTICLE 300 – DEFINITIONS

301 GENERAL

In this Bylaw, the following terms shall have the following meanings unless a contrary meaning is required by the context or is specifically prescribed. Words used in the singular include the plural and words used in the plural include the singular. Words used in the present tense include the future.

302 DEFINITIONS

Accessory Building

A building devoted exclusively to an accessory use as herein defined.

Accessory Structure

A structure, such as, but not limited to, a detached garage, shed, swimming pool, tennis court, pier, greenhouse, or a structure with finished living space that is not a "dwelling unit," located on the same lot with and accommodating a use accessory to the principal structure or use of the lot, except a pier may be located on a lot adjacent to the principal structure.

Accessory Use

An activity customarily incidental to and located on the same lot as a principal use conducted by the same person or his agent. No use (other than parking) shall be considered "accessory" unless functionally dependent on and occupying less land area than the principal use to which it is related. (1987)

Applicant

The person submitting any application under the provisions of this Bylaw including a firm, association, organization, partnership, trust, company or corporation as well as an individual.

Bed and Breakfast

A structure originally built as a dwelling, in which the operator resides, and not more than four guest units are offered for overnight lodging with or without meals. (1987)

Board of Appeals

The Board of Appeals of the Town of Duxbury.

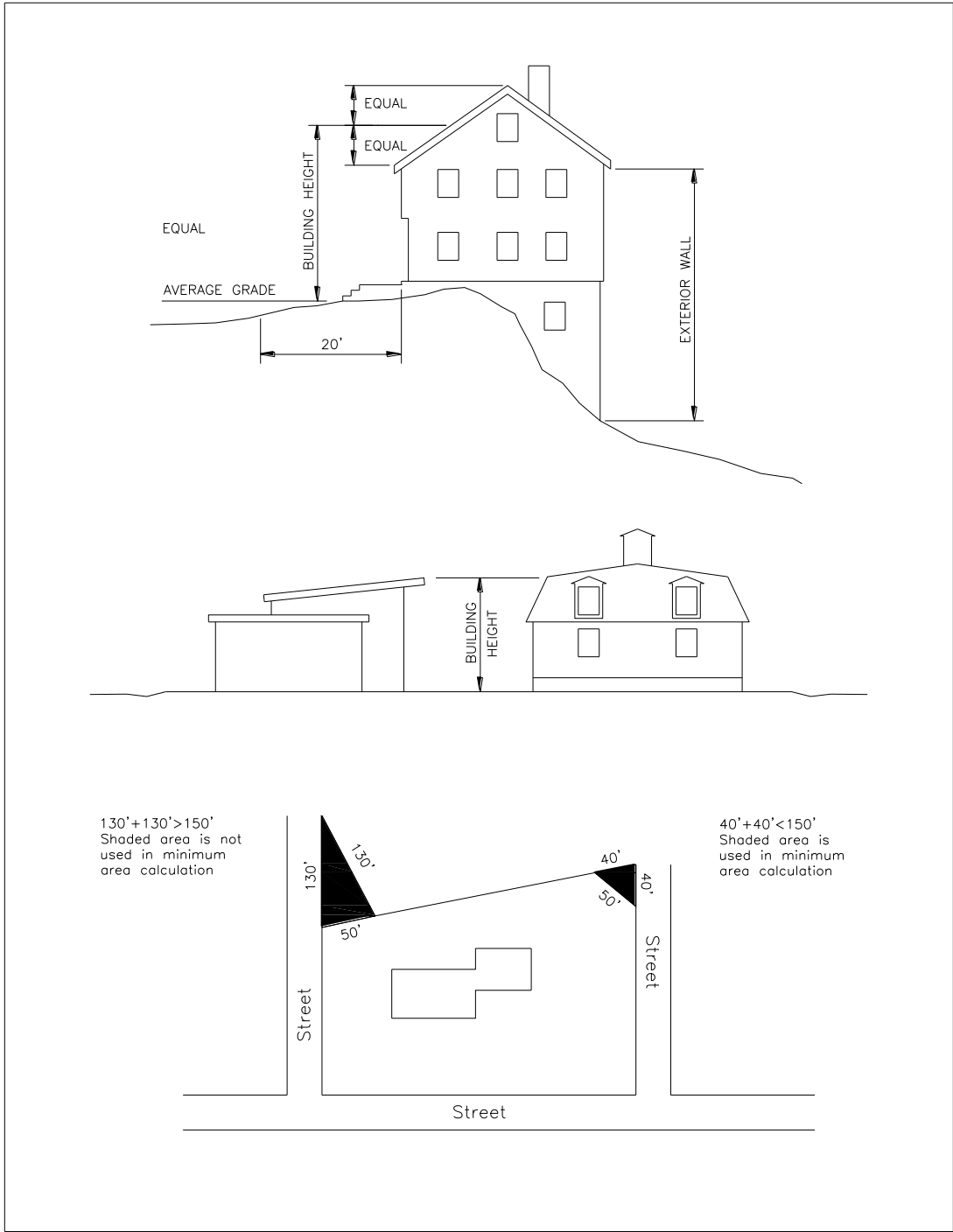
Building

A structure having a roof covering one hundred (100) square feet or more.

Building Height

The vertical distance from the average finished grade within twenty (20) feet of the structure on the street (frontage) side of a building to:

1. the highest point of the roof or parapet for flat or shed roofs, or
2. the midpoint between the lowest and highest points of the roof for gable, hip and gambrel roofs, or
3. the deck line for mansard roofs (with upper slope under four [4] inches per foot), and provided that at no point shall an exterior wall exceed the permitted heights by more than twelve (12) feet. **See Drawing in Section 300.**



Coverage

1. Building: The maximum percentage of a lot in any district which is covered by buildings which constitute principal and accessory uses thereof. Garages, barns, storage sheds or additions and alterations to the principal residential building occupying the lot shall not be exempt from the definition of building coverage.

2. Site: The percentage of a lot in any district which is covered by impervious structures, including the principal building and accessory structures on the lot. For the purposes of this section, such impervious structures shall include, and not be limited to, paved driveways and parking areas, sidewalks constructed of impervious materials, principal and accessory structures and other on-site amenities that render any portion of a lot impervious.

Developer

The person, persons, corporation, trust, firm, or partnership or other legal entity who shall be responsible for the development of land and/or structures or is charged with the execution of a planned development.

Dwelling

A building, or portion thereof, designed exclusively for residential occupancy, including single-family, two-family, and multiple family dwellings, but not including hotels, motels, boarding houses, trailers, or structures solely for the use of transient or overnight occupants.

Dwelling Unit

A building or a portion of a building providing living quarters for a single-family having a single set of kitchen facilities (a stove plus either or both a refrigerator and sink) not shared with any other unit; or quarters for up to six persons in a lodging house, dormitory, congregate housing, or similar group dwelling. (1987)

Family

1. One (1) or more persons related by blood or marriage and including not more than four (4) additional unrelated persons, or
2. Not more than five (5) unrelated persons, occupying a dwelling unit and living as a single housekeeping unit.

Farm

Any tract of land used for the production of crops or the rearing of animals or livestock.

Findings

A written report of a decision reached by a reviewing agency as required by this Bylaw.

Float

A temporary floating structure attached to mooring gear or piles.

Frontage

The boundary of a lot coinciding with a street line if there are both rights of access and potential vehicular access across that boundary to a potential building site and the street has been determined by the Planning Board to provide adequate access to the premises under the provisions of the Subdivision Control Law and Duxbury Subdivision Regulations measured continuously along one street line between side lot lines or in the case of corner lots, between one side lot line and the midpoint of the corner.

Gangway

A structure attached at one end to a pier or other permanent object and the other end resting on a float.

Guest Unit

A room or suite of rooms suitable for separate rental or occupancy in a hotel, motel, or similar establishment. Any room or suite of rooms containing a stove plus either or both a refrigerator and a kitchen sink shall be considered a dwelling unit (1987).

Home Occupation

The use of portion of a dwelling as a principal location for the practice of their occupation by a person (such as an architect, counselor, consultant, dentist, doctor, engineer, insurance broker, investment counselor, lawyer or real estate broker) who is a resident therein.

Home Owners' or Residents' Association

A legal organization approved by this Bylaw composed of all resident owners in a Residential Conservation Cluster responsible for owning or maintaining common property, providing for compulsory membership for each resident, equitable voting rights and effective participation opportunities.

Impervious Coverage

Referring to the condition in which portions of a lot are rendered impervious by structures which cover previously natural or undeveloped land area, therefore, potentially altering natural drainage and ground water recharge characteristics.

Improvement Schedule

A program extending over the period of a proposed development during which certain improvements agreed upon by the developer or required by the Board of Appeals or any other special permit granting authority are to be installed by the developer.

Informal Hearing

Any scheduled meeting not advertised as a public hearing of the reviewing body at which time the applicant may submit material.

Interested Party

Any person who holds an interest in property within three hundred feet of a lot with respect to which a special permit or variance is sought, or who is entitled to receive notice of hearings under G.L. c. 40A.

Land Improvements

An improvement involving the allocation of certain lands and/or buildings for utilization by the public.

Lot

A parcel of land used or set aside and available for use as the site of one or more buildings and structures accessory thereto or for any other definite purpose, in one ownership and not divided by a street, not including any land within the limits of a public or private way upon which such lot abuts, even if the fee to such way is in the owner of the lot.

Lot Area

The horizontal and contiguous area of the lot exclusive of any area in a public or private way open to public uses. Land under any waterbody, bog, swamp, wet meadow or marsh, as defined in G. L. c. 131 sec. 40, and as determined by the Conservation Commission, and/or land within the Wetlands Protection Overlay District, and/or land within any overhead easement, the purpose for which is the transmission of high voltage electricity, shall not be included in the horizontal and contiguous portion of the lot area required for zoning compliance. If the distance between any two (2) points on lot lines is less than fifty (50) feet, measured in a straight line, the smaller portion of the lot, as divided by that line, shall not be included in lot area nor shall any portion of its perimeter be counted toward meeting the frontage requirements unless the two points are separated by less than one hundred fifty (150) feet measured along the line. **See drawing Section 300.**

New Pier

A pier constructed on a lot where no pier currently exists or where a pre-existing pier is being replaced or reconstructed.

Pier

An elevated structure built over a wetland resource area to provide access from an upland land area to Duxbury Bay and its tributaries.

Planning Board

The Planning Board of the Town of Duxbury.

Pre-Existing Pier

An existing pier that at the time of application is structurally sound and functional to provide access to the water or was structurally sound and provided access to the water within two (2) years prior to the date of application to the Conservation Commission for reconstruction.

Projections

Cornices, eaves, gutters, outside chimneys, belted courses, steps, stoops, bay windows, terraces, and bulkheads.

Public Donation

A technique of preserving common open space by its donation either by a perpetual conservation or preservation restriction or in fee to the Town for conservation purposes or to a public agency or private charitable organization whose purposes include the acquisition and holding of land for open space purposes.

Research and Development

Administrative research, development, and testing facilities that do not involve the manufacture, fabrication, processing, or sale of products. Such uses shall not violate any odor, dust, smoke, gas, noise, radiation, or similar pollution standards.

Setback

The distance from a property line to a building or other structure.

Shared Pier

A pier which is owned by two or more individuals or organizations that own contiguous waterfront property.

Sign

Any word, letter, symbol, drawing, picture, design, device, article or object which advertises, calls attention to or indicates the location of any premises, person or activity whatever its manner of composition or construction and however displayed.

Story

That part of a building above the basement or cellar and between the top of any tier of floor beams and the top of the tier of floor or roof beams next above.

Street

1. Feeder

A way which, in addition to providing access to abutting properties, intercepts local streets to provide a route serving fifty or more dwelling units, to give access to community facilities and/or other collectors and major streets.

2. Local

A way designated to be used primarily to provide access to abutting properties.

Structure

A combination of material assembled at a fixed location to give support or shelter, such as a building, tower framework, platform, or the like.

1. Accessory Structure

A structure, such as a detached garage, shed, swimming pool, tennis court, pier, or greenhouse, located on the same lot with and accommodating a use accessory to the principal structure or use of the lot, or a pier located on an adjacent lot to the principal structure.

2. Principal Structure

A structure in which the primary use of the lot is conducted; including porches, decks, utility building, and any other attached projections of the structure.

Town

The Town of Duxbury.

Town Landings

Designated areas to which the town has a right, which have been surveyed and recorded with the Plymouth County Registry of Deeds to the low water mark and

including, in north to south orientation along the shoreline, Old Cove Landing, Drew Salt Works Landing, Simeon Soule's Landing, Peterson's Landing, Powder Point Bridge (at the west end on both north and south sides), Anchorage Lane Landing, Bluefish River Landing, Mattakeeset Town Pier, Winsor Street Landing, Water Street Landing, Josselyn Landing, Harden Hill Road Landing, Howland's Landing, Landing Road Landing, and Hicks Point Road Landing.

Use Restriction

A qualification placed upon any or all parts of a site which shall define the uses permitted on the land.

Waterfront Scenic Area Overlay District (WSA):

A WSA is the abutting waterfront land viewed from a public road, along which there is an open, unobstructed view of the ocean, harbor, bay or estuary. The WSA boundaries are as illustrated on a plan approved by a town meeting vote and are delineated by a line extending from a public road ROW centerline 300 feet seaward, starting at the first affected parcel and continuing to the final parcel. A WSA is defined for the purposes of new pier construction and repairs.

Way

Any public way or private way shown in a plan approved under the provisions of the Subdivision Control Law or any way in existence when the provisions of said Subdivision Control Law became effective in the Town, having, in the opinion of the Planning Board, suitable width, suitable grades, and adequate construction to provide for the needs of vehicular traffic in relation to the proposed use of land abutting thereon or served thereby and for the installation of municipal services to serve such land and the buildings erected or to be erected thereon.

Ways to the Water

Designated areas to which the Town has rights as public ways to the water, by gift or otherwise, which may or not be restricted as to their usage and which have not been specifically laid out and surveyed to the low water mark and recorded as Town Landings and including, in north to south orientation along the shoreline, Shipyard Lane Beach, Elder Brewster Road, Samoset Road, Sagamore Road, Massasoit Road, Miles Standish Home Site, Longview Road, Elderberry Lane, and Bay Farm.

ARTICLE 400 - USE, INTENSITY, DIMENSIONAL AND COVERAGE REGULATIONS FOR ALL DISTRICTS

401 BASIC REQUIREMENTS FOR ALL DISTRICTS

401.1 Prohibited Uses

In any district, no use will be permitted which will produce a nuisance or hazard from fire or explosion, toxic or corrosive fumes, gas, smoke, odors, obnoxious dust or vapor, harmful radioactivity, offensive noise or vibration, flashes, objectionable effluent, or electrical interference which may affect or impair the normal use and peaceful enjoyment of any property, structure or dwelling in the Town. Parks for trailers, travel trailers, tent trailers, trailer coaches and motor homes; auto dismantling, junkyards, privately developed and operated septage waste disposal/treatment facilities and refuse disposal facilities are expressly prohibited.

The provisions of this Bylaw shall not apply to lands in excess of five (5) acres actively devoted to agriculture, horticulture, floriculture or viticulture, nor to use of pesticides when used on such lands in accordance with G. L. c. 132b.

401.2 Nonconforming Uses

Any lawful building or structure, or lawful use of a building, structure, or part thereof, existing at the time of adoption of this Bylaw, or existing at the time of an amendment to this Bylaw, which does not conform to the regulations thereof may be continued as a nonconforming use, subject to the following provisions. For the purpose of this 401.2, a use or structure shall not be deemed to not conform to such regulations simply because the lot on which the use or structure exists itself does not conform.

1. Discontinuance

Any nonconforming use which has been discontinued for more than two (2) years or any nonconforming buildings, structures, or land used primarily for agriculture, floriculture or horticulture which has been discontinued for more than five (5) years, shall not be re-established and any future use shall conform to the regulations of this Bylaw.

2. Restoration

A nonconforming structure or structure occupied by a nonconforming use which has been destroyed by fire or other casualty may be reconstructed; provided that the reconstruction is substantially completed within three (3) years of the date of destruction. Reconstruction of nonconforming structures on land used primarily for

agriculture, horticulture or floriculture must be substantially completed within five (5) years of the date of destruction. Any extensions or alterations shall comply with the requirements of Sections 401.2.3 and 401.2.4, as applicable.

3. Changes of Use and Limitation on Intensity and Size of Use - Other Than Single or Two-Family Residential Dwellings:

As provided in G. L. c. 40A, sec. 6, a lawfully pre-existing nonconforming use and/or structure, other than a single or two-family residential dwelling, may be reconstructed, altered or extended only if: (1) said reconstruction, alteration or extension itself conforms with all the provisions of the Zoning Bylaw; (2) there is a finding by the Board of Appeals that such reconstruction, alteration or extension will not be substantially more detrimental to the neighborhood than the existing nonconforming structure or use; (3) that said extension, alteration or change is in accordance with the standards noted below; and (4) that the Board of Appeals grants a special permit as provided in Section 906.2.

a) Guidelines for Review of Extensions, Alterations or Changes to Preexisting, Nonconforming Uses and Structures: Recognizing the need to provide guidelines for determining relative impacts upon the Town and the immediate neighborhood from an expansion, alteration or change of pre-existing nonconforming uses and structures, and recognizing the basis and consistent principles of zoning with respect to minimizing nonconforming uses and structures, the following shall apply to the review of special permit applications under this Section:

(i) The Board of Appeals shall encourage extensions, alterations or changes to nonconforming structures and uses toward greater, if not complete, conformance with the provisions of the Zoning Bylaw and to reduce the degree of nonconformity;

(ii) The Board of Appeals shall not encourage the expansion of a nonconforming structure or use as measured by either the:

(aa) amount of floor space or land area used, or

(bb) volume of activity, including but not limited to an increase in the intensity of use and/or a change in the nature of purpose of the use;

(iii) The Board of Appeals shall prohibit the expansion of nonconforming structures and uses unless there will be no demonstrable adverse impacts on abutting properties and those properties that generally characterize the neighborhood or locus within which the expansion is sought, and;

(iv) The Board of Appeals shall not encourage the expansion of nonconforming structures and uses if the expansion will negatively impact the Town of Duxbury's ground, coastal or surface waterbodies.

b) Table of Presumptively Not More Detrimental Extensions, Alterations, or Changes to Preexisting, Nonconforming Uses and Structures: An extension, alteration or change to a lawfully preexisting nonconforming use or structure shall be presumed not to be substantially more detrimental to the neighborhood

if the guidelines and standards of Section 401.2.3 (a) are met and if the extension, alteration or change also is in compliance with the following:

TABLE OF PRESUMPTIVELY NOT MORE DETRIMENTAL EXTENSIONS, ALTERATIONS, OR CHANGES TO OTHER THAN SINGLE OR TWO-FAMILY RESIDENTIAL DWELLINGS

Issue	Presumptively Allowable Changes, Alterations, or Extensions
If current site coverage requirements are exceeded.	The extension, alteration, or change decreases the percentage of site coverage.
If the structure exceeds current height requirements.	The extension, alteration, or change decreases the violation of the current height requirements.
If the structure or use exceeds current parking or loading area requirements.	The requirements of section 603 of the Zoning Bylaw are met or if the Board of Appeals determines that the existing use and proposed expansion or site conditions do not warrant the number of parking spaces required by Section 603.
If the structure or use exceeds, or is in violation of, or violates any other provision of the Zoning Bylaw.	The extension, alteration, or change meets the guidelines specified in Section 401.2.3 above.

4. Alteration, Reconstruction, Extension or Structural Changes to Preexisting Nonconforming Single and Two-Family Residential Structures.

a) As provided for in G. L. c. 40A sec. 6, a nonconforming single or two-family dwelling or structure accessory thereto may be altered, reconstructed, extended or otherwise structurally changed provided that: (1) the proposed alteration, extension or structural change itself conforms to the requirements of the present Bylaw and does not intensify any existing non-conformities or result in any additional non-conformities in which event the Zoning Enforcement Officer may issue a building permit and an application to the Board of Appeals need not be made; or (2) as provided below the Board of Appeals finds that (i) there is no substantial increase in the nonconforming nature of **said structure; and (ii) such** reconstruction, alteration or extension will not be substantially more detrimental to the neighborhood than the existing nonconforming structure or use.

Recognizing the need to provide guidelines for determining the meaning of the phrases "increase the nonconforming nature of said structure" and "substantially more detrimental to the neighborhood," the following shall apply to the review of applications **subject to this provision** to alter, reconstruct extend or structurally change a preexisting nonconforming single- and two-family residential structure:

- (i) An application must be made to the Board of Appeals to expand or change the structure;
- (ii) The Board of Appeals must make a determination as to the particular respect or respects in which the existing structure or lot does not conform to the requirements of the present Bylaw;
- (iii) Should the Board of Appeals conclude that the proposed change would substantially increase the nonconforming nature of the structure or lot, the applicant will not be entitled to the issuance of a special permit;
- (iv) If the Board of Appeals determines, that the proposal will not substantially increase the nonconforming nature of the structure or the lot, the applicant will also be required to show that the change will not be substantially more detrimental than the existing nonconforming structure or use to the neighborhood;
- (v) If the Board of Appeals determines that the proposal will be more substantially detrimental to the neighborhood, the special permit sought will be denied unless the Board of Appeals determines that a special permit can be approved with conditions that would make the change substantially not more detrimental, in which case the Board of Appeals may approve a special permit with such conditions.
- (vi) For the purposes of this Section, determination of "substantially more detrimental to the neighborhood" shall include consideration of and impacts to, the general and immediate neighborhood from the resulting height, building coverage, impervious coverage, and width of the altered, reconstructed, extended or structurally changed structure. Additionally, a determination whether an altered, reconstructed, extended or structurally changed structure will be "substantially more detrimental to the neighborhood" shall include the resulting impacts to views and vistas from abutting properties and public and private ways, increase in traffic, noise, surface water runoff and related site planning issues.

5. Alteration to Dwellings on a Single Lot

Any alteration, extension, reconstruction or structural change to a dwelling on a lot containing more than one (1) dwelling shall require a special permit and a finding by the Board of Appeals that such alteration, extension, reconstruction or structural change shall not be more detrimental to the neighborhood than the existing dwelling, in accordance with the procedure outlined in Section 401.2.4 above.

401.3 Municipal Uses

Municipal uses shall be established by a two-thirds (2/3) vote of Town Meeting in accordance with the General Laws of the Commonwealth of Massachusetts. All buildings or structures for an approved municipal use shall meet all applicable dimensional, density, and design requirements of this Bylaw.

401.4 Permitted Uses

1. No building or other structure shall be erected and no building, structure, or land shall be used for any purpose or in any manner other than as regulated and as permitted and as set forth herein for each district.
2. Uses permitted and uses allowed by the Board of Appeals, or any other Special Permit Granting Authority (SPGA) authorized by this Bylaw, shall be in conformity with all the density and dimensional regulations and any other pertinent requirements of this Bylaw as set forth herein for each district.
3. A building, use or structure not specifically permitted shall be deemed prohibited.
4. Notwithstanding any other provision of this Bylaw, no more than one (1) single-family dwelling or dwelling unit is permitted by right on any lot in any district. Nothing in this sub-section implies that one (1) single-family dwelling or dwelling unit is permitted in any district where this Bylaw does not expressly so provide.

401.5 Building or Use Permit

No building or structure shall be used, constructed, relocated, added to or demolished without a building permit having been issued by the Zoning Enforcement Officer. No such permit shall be issued until such construction, alteration, or use, as proposed complies in all respects with the provisions of this Bylaw or with a decision rendered or special permit granted by the Board of Appeals or any other Special Permit Granting Authority (SPGA) authorized by this Bylaw.

401.6 Plot Plan Accompanying Application

1. Minimum Requirements

Any application for a building, structure or use permit or a certificate of occupancy shall be accompanied by a plot plan in triplicate, accurately drawn to a scale of one (1) inch equals forty (40) feet, showing the actual shape, area and dimensions of the lot to be built upon, the exact location and size of any buildings or structures already on the lot, the location of proposed alterations to and enlargements of existing buildings or structures, driveways, the location of new buildings or structures to be constructed together with the lines within which all buildings or structures are to be erected or enlarged, the existing and intended use of each building or structure and all streets and ways on or adjacent to the lot, the delineation of any Wetland Protection Overlay District, Flood Hazard Areas Overlay District, or Aquifer Protection Overlay District areas

located within a lot, or include a statement on the plan stating, "No part of lot is within zoned Wetlands Protection Overlay District, Flood Hazard Areas Overlay or Aquifer Protection Overlay Districts" and such other information as the Zoning Enforcement Officer may determine is necessary. In the case of a building or use permit for interior improvements to a building or structure, a plot plan shall not be required.

2. Additional Requirements

In addition, for all new buildings and structures, and all existing buildings and structures to be externally enlarged or expanded in ground area to an extent greater than thirty percent (30%) of internal floor areas or ground coverage, or six hundred (600) square feet, whichever is larger, plot plans shall show existing and approved abutting street grades, the proposed elevation of the top of the foundation of existing and proposed buildings or structures, existing and proposed topography, existing septic disposal systems, private wells, wetland boundary delineations as approved by the Conservation Commission, gas, water and other public utilities in the abutting street and the zoning classification of the abutting properties. Plot plans shall also show such other information as may be necessary to provide for the verification of compliance with the applicable provisions and the enforcement of this Bylaw, including, but not limited to, off street parking, screening and fencing. Plot plans shall be certified by a registered professional engineer or land surveyor. A record of all applications, plans, and permits shall be kept on file by the Zoning Enforcement Officer.

401.7 Lot Requirements for Nonresidential Uses

In a Residential Compatibility District and Planned Development Districts, all nonresidential uses permitted therein shall be located on lots not less than the minimum standards set forth for residential uses in the district in which the lot is located.

401.8

Exemptions for recorded lots are set forth in MGL, Chapter 40A, Section 6.

401.9 Lots in Two Towns

When a lot in one ownership is situated so that a part of it is in the Town and part is in an adjacent town, the provisions of this bylaw shall be applied to that portion of the lot which lies in the Town in the same manner as if the entire lot were situated therein; i.e., the entire area and frontage shall be considered in determining conformity to the dimensional requirements herein. The use of the portion of the lot in the Town shall conform to the provisions herein.

401.10 Reduction of Minimum Requirements

No lot, yard, court or other open space already having less than the minimum requirements in this Bylaw shall be further divided or reduced with respect to such minimum requirement and requirements.

402 FLOOD HAZARD AREAS OVERLAY DISTRICT

402.1 Purpose of the Flood Hazard Areas Overlay District

The purposes of the Flood Hazard Areas Overlay District are to:

1. Ensure public safety through reducing the threats to life and personal injury;
2. Eliminate new hazards to emergency response officials;
3. Prevent the occurrence of public emergencies resulting from water quality, contamination, and pollution due to flooding;
4. Avoid the loss of utility services which if damaged by flooding would disrupt or shut down the utility network and impact regions of the Town beyond the site of flooding;
5. Eliminate costs associated with the response and cleanup of flooding conditions; and
6. Reduce damage to public and private property resulting from flooding waters.

402.2 Flood Hazard Areas Overlay District Boundaries

The Flood Hazard Areas Overlay District shall be considered an overlay district throughout the Town. It shall include all special flood hazard areas within the Town, as shown and set forth in the Plymouth County Flood Insurance Rate Map (FIRM), panels 25023C0207J, 0209J, 0216J, 0217J, 0219J, 0236J, all dated July 17, 2012, and panels 25023C0226K, 0228K, 0229K, 0233K, 0234K, 0237K, 0238K, 0239K, 0241K, 0242K, 0243K, 0244K, 0263K, 0356K AND 0357K all dated November 4, 2016, issued by the Federal Emergency Management Agency (FEMA) for the administration of the National Flood Insurance Program (NFIP) designated as Zones A, AE, AO and VE, which indicate the 100-year regulatory floodplain. The exact boundaries of the District may be defined by the 100-year base flood elevations shown on the FIRM and further defined by the Flood Insurance Study (FIS) report dated November 4, 2016. The FIRM and FIS report are incorporated herein by reference and are on file with the Town Clerk, and available for viewing in the Planning Department.

402.3 Compliance with Other Law and Regulations

All development in the district, including structural and non-structural activities, whether permitted by right or by special permit, must comply with the following state statute and regulations, except that provisions of this Section that are more restrictive shall apply.

1. Massachusetts General Laws, Chapter 131, Section 40;
2. Sections of the Massachusetts State Building Code (780 CMR) which address floodplain and coastal high hazard areas;
3. Coastal Wetlands Restriction, DEP (currently 310 CMR 12.00);
4. Minimum Requirements for the Subsurface Disposal of Sanitary Sewage, DEP (currently 310 CMR 15, Title 5);

Any variances from the provisions and requirements of the above referenced state regulations may only be granted in accordance with the required variance procedures of these state regulations.

402.4 Base Flood Elevation and Floodway Data

1. Floodway Data. In Zone A and AE, along watercourses that have not had a regulatory floodway designated, the best available Federal, State, local, or other floodway data shall be used to prohibit encroachments in floodways which would result in any increase in flood levels within the Town during the occurrence of the base flood discharge.

2. Base Flood Elevation Data. Base flood elevation data is required for subdivision proposals or other developments greater than fifty (50) lots or five (5) acres, whichever is the lesser, within unnumbered A zones.

402.5 Notification of Watercourse Alteration

In a riverine situation, the Building Commission shall notify the following of any alteration or relocation of a watercourse:

1. The Chief Executive Officer of adjacent Cities and Towns

2. NFIP State Coordinator
Massachusetts Department of Conservation and Recreation
Currently located at 251 Causeway Street, Suite 600-700
Boston, MA 02114-2104

3. NFIP Program Specialist
Federal Emergency Management Agency, Region I
Currently located at 99 High Street, 6th Floor
Boston, MA 02110.

402.6 Other Use Regulations

1. Within Zone AO on the FIRM, adequate drainage paths must be provided around structures on slopes, to guide floodwaters around and away from proposed structures.

2. In Zone AE, along watercourses that have a regulatory floodway designated on the FIRM, encroachments are prohibited in the regulatory floodway which would result in any increase in flood levels within the community during the occurrence of the base flood discharge.

3. Man-made alteration of sand dunes within Zone VE which would increase potential flood damage is prohibited.

4. All new construction and substantial improvements to existing structures within Zone VE must be located landward of a boundary line of the Wetlands Protection Overlay District, except those structures allowed by sub-sections 404.9 or 404.11.

5. All subdivision proposals must be designed to assure that:
 - a) Such proposals minimize flood damage;
 - b) All public utilities and facilities are located and constructed to minimize or eliminate flood damage; and
 - c) Adequate drainage is provided to reduce exposure to flood hazards.
6. Existing site contours and elevations of existing structures shall be included on plan proposals.

402.7 Permitted Uses

The following uses of low flood damage potential and causing no obstructions to flood flows are allowed, provided they are permitted in the underlying district and they do not require structures, fill, or storage of materials or equipment:

1. Agricultural uses such as farming, grazing, truck farming, and horticulture.
2. Forestry and nursery uses.
3. Outdoor recreational uses, including fishing, boating, and play areas.
4. Conservation of water, plants, and wildlife.
5. Wildlife management areas, and foot, bicycle, and/or horse paths.
6. Temporary non-residential structures used in connection with fishing, growing, harvesting, storage, or sale of crops raised on the premises.
7. Man-made alteration of sand dunes for dune restoration and beach enhancement projects for the purposes of flood and erosion control to adapt to the long-term effects of sea level rise.

402.8 Definitions

Base Flood means the flood having a one percent (1%) chance of being equaled or exceeded in any given year.

Flood Insurance Rate Map (FIRM) means the official map of a community on which FEMA has delineated both the areas of special flood hazard and the risk premium zones applicable to the community.

Federal Emergency Management Agency (FEMA) administers the National Flood Insurance Program. FEMA provides a nationwide flood hazard area mapping study program for communities as well as regulatory standards for development in the flood hazard areas.

Flood Insurance Study (FIS) means an examination, evaluation, and determination of flood hazards, and, if appropriate, corresponding water surface elevations, or an examination, evaluation and determination of flood-related erosion hazards.

Floodway means the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation.

Lowest Floor means the lowest floor of the lowest enclosed area (including basement or cellar). An unfinished or flood resistant enclosure, usable solely for parking of vehicles, building access or storage in an area other than a basement area is not considered a building's lowest floor, PROVIDED that such enclosure is not built so as to render the structure in violation of the applicable non-elevation design requirements of NFIP Regulations 60.3.

Special Flood Hazard Area means an area having special flood and/or flood-related erosion hazards, and shown on the FIRM as Zones A, AO, AE and VE.

Structure means, for floodplain management purposes, a walled and roofed building, including a gas or liquid storage tank, that is principally above ground, as well as a manufactured home. STRUCTURE, for insurance coverage purposes, means a walled and roofed building, other than a gas or liquid storage tank, which is principally above ground and affixed to a permanent site, as well as a manufactured home on foundation. For the latter purpose, the term includes a building while in the course of construction, alteration, or repair, but does not include building materials or supplies intended for use in such construction, alteration, or repair, unless such materials or supplies are within an enclosed building on the premises.

Substantial Damage means damage of any origin sustained by a structure whereby the cost of restoring the structure to its before-damaged condition would equal or exceed fifty (50) percent of the market value of the structure before the damage occurred.

Substantial Improvement means any repair, reconstruction, or improvement of a structure, the cost of which equals or exceeds fifty (50) percent of the market value of the structure either (a) before the improvement or repair is started, or (b) if the structure has been damaged and is being restored, before the damage occurred. For the purposes of this definition, "substantial improvement" is considered to occur when the first alteration of any wall, ceiling, floor, or other structural part of the building commences, whether or not that alteration affects the external dimensions of the structure.

Zone A means the 100-year floodplain area where the base flood elevation (BFE) has not been determined. To determine the BFE, use the best available federal, state, local, or other data.

Zone AE (for new and revised maps) means the 100-year floodplain where the base flood elevation has been determined.

Zone AO means the 100-year floodplain with flood depths of one (1) to three (3) feet, where a clearly defined channel does not exist, where the path of flooding is unpredictable, and where velocity flow may be evident. Such flooding is characterized by ponding or sheet flow.

Zone VE (for new and revised maps) means a special flood hazard area along a coast subject to inundation by the 100-year flood with additional hazards due to velocity (wave action). Base flood elevations have been determined.

Zone X identifies areas in the Town that the Flood Insurance Study has determined as areas of moderate or minimal flood hazard.

403 DUNES PROTECTION DISTRICT

403.1 General

This section does not grant any property rights, it does not authorize any person or persons to trespass, infringe upon or injure the property of another, and it does not excuse any person of the necessity of complying with other sections of this Bylaw or other applicable laws, regulations or Bylaws.

403.2 Boundary Line Plot Plan

Whenever an application is made for a permitted use or a special permit in the Dunes Protection District which the Zoning Enforcement Officer believes may be affected by flooding, there shall be provided as part of such application a plan certified by a registered land surveyor of the lot for which the permit has been requested showing existing and proposed elevations at one-foot intervals. In the cases of a building permit for an interior improvement, this paragraph is not applicable.

403.3 Permitted Uses

1. Conservation and restoration of dunes and beach vegetation.
2. Wildlife management shelters and enclosures.
3. Outdoor recreation, nature study, boating, fishing including shell fishing.
4. Fences to prevent the erosion of beaches and dunes and to delineate rights-of-way acceptable for pedestrian and vehicular travel, and appropriate non-commercial signs not exceeding thirty-two (32) square feet, notwithstanding the provisions of Section 601 Sign Regulations.
5. Harvesting kelp and seaweed.
6. Footpaths.
7. Conservation of soil, water, plants, and wildlife.

8. Maintenance and replacement of existing roadways and parking areas.
9. Temporary storage of materials or equipment for a period not to exceed three (3) months in any calendar year; said permit to be renewable for one additional three-month period only.

403.4 Prohibited Uses and Structures

1. Dumping, filling, excavating or transferring of any material, which will substantially alter said district, interfere with the natural flow patterns of the tidal areas, be detrimental to dune areas or interfere with stabilization efforts within said district are prohibited, except as authorized by a special permit granted under Section 403.5, and those activities allowed as permitted uses in Section 403.3.
2. Residential dwellings.
3. Structures except as authorized by a special permit under Section 403.5.

403.5 Uses and Structures Permitted by Special Permit

1. New parking areas, roadways and enlargement of existing parking areas and roadways of the Town or a non-profit organization.
2. Structures providing access to the beach in accordance with applicable state or federal laws.
3. Accessory use to an existing residential home or commercial structure located on that lot, such as a footbridge or plank walk.
4. Accessory use to an existing residential or commercial structure located on that lot, such as a boat landing and boathouse, the latter not to exceed twenty (20) feet in height or one hundred (100) square feet in total ground coverage.
5. Wireless Telecommunications Services Facility in accordance with Section 610.

403.6 Special Permit Goals

Whenever the Board of Appeals is authorized to grant a special permit in the Dunes Protection District said Board shall assure to a degree consistent with a reasonable use of the location that any permitted structure or use conserves the land and any structures, and protects and preserves the marshes, dunes, beaches and other adjoining wetlands in order to regulate development, to protect marine life, to preserve land and water for recreation purposes and to encourage the most appropriate uses of the land.

403.7 Special Permit Procedures

1. The Board of Appeals shall refer a special permit application to the Conservation Commission, the Board of Health, and the Planning Board for written comments and recommendations before taking final action on said special permit application. In addition to the above noted boards, the Board of Appeals may refer a special permit application to any other Town

agency/board/department for comments and recommendations if it so desires before taking final action on said special permit application.

Any such board or agency to which applications are referred for comment shall make its written recommendations and comments and send copies thereof to the Board of Appeals and to the applicant within thirty-five (35) days of receipt of the referral request by said board or agency or there shall be deemed no opposition or desire to comment. The Board of Appeals shall not act upon said special permit until either comments from referred boards or agencies have been received or said thirty-five (35) days have elapsed, whichever is sooner.

2. The Board of Appeals shall explain any departures from the recommendations of the other boards or agencies in its decision.

403.8 Exemptions:

The following are specifically exempt from the provisions of Section 403:

All residential dwellings, commercial and business buildings existing in the Dunes Protection District on April 4, 1978, or building permits for which were issued prior to April 4, 1978, and those portions only of the lots needed to repair, rebuild, modify or enlarge, any such buildings, including but not limited to, the addition of garage and living space and construction of appurtenant outbuildings, together with such filling, diking, and/or drainage as may be necessary for the protection of said structures from flood inundation, provided that all construction of any type is consistent with the laws of the Commonwealth of Massachusetts, in compliance with all other zoning requirements, and does not affect the natural flow pattern of any watercourse.

404 WETLANDS PROTECTION OVERLAY DISTRICT

404.1 Purpose

The foundation of the Wetlands Protection Overlay District is to afford safeguards for both the coastal and inland wetlands located within the Town of Duxbury. The district encompasses both wetland areas and an upland buffer zone located along the edge of the wetlands as depicted on the Wetlands and Watershed Protection Map, as amended. These upland areas are vital components to ensuring the proper function of the wetlands serving to recharge the Town's groundwater resources. This Bylaw serves to minimize any potential adverse impacts in the Wetlands Protective Overlay District and afford protection to the community's groundwater and environmentally sensitive areas.

This section does not grant any property rights, it does not authorize any person to trespass, infringe upon or injure any property of another, and it does not excuse any person of the necessity of complying with other sections of this Bylaw or other applicable laws, regulations and Bylaws.

404.2 Location of District

The location and boundaries of the Wetlands Protection Overlay District shall be as shown on map entitled "Map of Wetlands and Watershed Protection District in the Town of Duxbury, Massachusetts," dated March 4, 1971, as revised and amended to date and on file in the office of Town Clerk, and said map with all its contents is a part of Duxbury Protection Zoning Map and Bylaw.

All land within twenty-five (25) feet, measured horizontally, of the high water line of all waterbodies, the mean high tide line and the banks of all watercourses is within the Wetlands Protection Overlay District, except when specifically excluded. Where contours are used on the Wetlands and Watershed Protection District Map as the boundaries of the district, their location on the ground shall be determined by their elevation based on the datum irrespective of their delineated location on the zoning map.

Where a boundary line shall include a numerical figure followed by the letters M.S.L., it is at that number of feet above Mean Sea Level. The basic source for determining such a line shall be the United States Geological Survey as interpreted by the Zoning Enforcement Officer or subsequent field surveys.

404.3 Boundary Line Plot Plan

Whenever an application is made for a building or use permit which the Zoning Enforcement Officer believes may involve the use of land in the Wetlands Protection Overlay District boundary, there shall be provided as part of such application a plan certified by a registered land surveyor of the lot on which such building or structure is intended to be built, showing the exact location of the Wetlands Protection Overlay District boundary as described in the "Wetlands and Watershed Protection District Map, dated March 4, 1971" as amended to date and the Duxbury zoning map dated March 4, 1971.

404.4 Permitted Uses and Structures

1. Conservation of soil, water, plants and wildlife.
2. Outdoor recreation, including play and sporting areas, hunting where legally permitted, including duck blinds and foot-bicycle-horse paths.
3. Proper operation and maintenance of dams and other water control devices, including temporary alteration of the water level for agricultural, emergency or maintenance purposes or for propagation of fish.
4. Forestry, grazing, farming, nurseries, truck gardening and harvesting of crops including but not limited to such crops as cranberries, marsh hay, seaweed, berries, fruits and seeds and nonresidential buildings or structures used only in conjunction with fishing, shellfishing or the growing, harvesting or storage of crops raised on the premises.
5. Flower or vegetable garden, lawn and fence.

6. Conservation and restoration of dunes and beach vegetation.
7. Wildlife management shelters.
8. Harvesting kelp and weeds.
9. Fences to prevent the erosion of beaches and dunes and to delineate rights of way acceptable for pedestrian and vehicular travel, and appropriate non-commercial signs not exceeding thirty-two (32) square feet, notwithstanding the provisions of Section 601 Sign Regulations.
10. Nature Study, boating, fishing including shellfishing.

404.5 Prohibited Uses and Structures

1. Dumping, filling, excavating or transferring of any materials which will alter any marsh, wetland or bog or which will reduce the natural water storage capacity of the land, interfere with the natural flow patterns of any watercourse or tidal areas, or degrade the quality of surface or groundwater within this district is prohibited.
2. Private or public wells.
3. On site wastewater disposal septic tanks or leaching fields.
4. Buildings or structures except those permitted by Sections 404.4 and permitted by special permit by Sections 404.6 and 404.9.

404.6 Uses Permitted by Special Permit

Upon issuance of a special permit by the Board of Appeals, and subject to such special conditions and safeguards as the Board of Appeals may impose, the following uses and structures may be permitted:

1. Accessory use or structure to a residential home located on that lot or an adjoining lot in common ownership, such as a footbridge, plank walk or pier.
2. Temporary storage of materials or equipment for a period of not to exceed three (3) months in any calendar year; said permit to be renewable for one additional three-month period only.
3. Dams, excavations, or changes in watercourses to create ponds, pools for swimming, fishing, wildlife or other recreational or agricultural uses, scenic features or for drainage improvements.
4. Accessory use to residential or commercial structure located on that lot, such as a boat landing and boathouse, the latter not to exceed twenty (20) feet in height or one hundred (100) square feet in the total ground coverage.
5. Utilities installation; unless said utility is a Solar Photovoltaic Facility as defined and regulated by Article 600, Section 621 of this Bylaw, in which case the Planning Board shall serve as the Special Permit Granting Authority and/or Administrative Site Plan Review board in reviewing the application consistent with Article 600, Section 621 and this Section 404.
6. Parking areas enlargement of existing parking areas.

7. Wireless Telecommunications Services Facility in accordance with Section 610.

404.7 Special Permit Goals

Whenever the Board of Appeals is authorized to grant a special permit in the Wetlands Protection Overlay District, said Board shall assure to a degree consistent with a reasonable use of the location that said use: conserves the value of land, buildings and structures; facilitates the protection and provision of a water supply through preservation and maintenance of the groundwater table; protects and preserves the inland marshes, bogs, ponds and watercourses and their adjoining wetlands in order to prohibit development and thereby to safeguard their purity, protect marine life and reserve for recreation purposes; and encourages appropriate uses of the land.

404.8 Special Permit Procedures

1. The Board of Appeals shall refer a special permit application to the Conservation Commission, the Duxbury Bay Management Commission, the Board of Health, and the Planning Board for written comments and recommendations before taking final action on said special permit application. In addition to the above noted boards, the Board of Appeals may refer a special permit application to any other Town agency/board/department for comments and recommendations if it so desires before taking final action on said special permit application.
2. Any such board or agency to which applications are referred for comment shall make its written recommendations and comments and send copies thereof to the Board of Appeals and to the applicant within thirty-five (35) days of receipt of the referral request by said board or agency or there shall be deemed no opposition or desire for comment. The Board of Appeals shall not act upon said special permit until either comments from referred boards or agencies have been received, or said thirty-five (35) days have elapsed, whichever is sooner.
3. The Board of Appeals shall explain any departures from the recommendations of the other Town boards or agencies in its decision.

404.9 Special Permit for Use and Construction

The Board of Appeals may grant a special permit for the use and construction on land in the Wetlands Protection Overlay District despite the prohibition of Section 404.5 provided that:

- a. The proposed use is allowed in the Residential Compatibility District or, if more restrictive, the zoning district in which the majority of the remainder of the parcel lies;
- b. All other requirements of the Bylaw are met;
- c. The Board makes a determination, following referral to the Conservation Commission, Board of Health, and Planning Board, that:

- The location is not within the wetland as defined either under Section 40, chapter 131 M. G. L., or by soils type (very poorly drained, poorly drained or alluvial) as determined by the USDA Soils Conservation Service or on-site investigation by a qualified soil scientist, and
 - The site is not subject to inundation in a one-hundred year flood, and
 - The use will not endanger health or safety.
- d. The Conservation Commission acting within the scope of its jurisdiction has approved such use and construction.

The Conservation Commission, Board of Health and the Planning Board shall report their written recommendations to the Board of Appeals within thirty-five (35) days of receipt of the referral. The Conservation Commission shall be deemed to have approved such use and construction unless its written disapproval is received by the Board of Appeals within such thirty-five (35) days. The Board of Appeals shall explain any departures from the recommendations of other Town agencies in its decision.

404.10 Special Requirements for Utility Installation

Any other Bylaw or regulation to the contrary notwithstanding, no construction requiring any utility, including electric line, water line, gas line and telephone line, or waste disposal or drainage facilities shall be permitted within the Wetlands Protection Overlay District unless the Board of Appeals shall determine that all utilities are located, elevated and constructed so as to minimize or eliminate flood damage and that methods of disposal for sewage, refuse and other wastes and methods of providing drainage are adequate to reduce flood hazards and prevent pollution. For solar photovoltaic facilities as defined and regulated by Article 600, Section 621 of this Bylaw, the Planning Board shall serve as the Special Permit Granting Authority and/or Administrative Site Plan Review board in reviewing the application consistent with Article 600, Section 621 and shall make the determination required by this Section.

404.11 Exemptions

The following are specifically exempt from the provisions of Section 404:

All residential dwellings, commercial and business buildings existing in the Wetlands Protection Overlay District on March 13, 1971, or building permits for which were issued prior to March 13, 1971, and those portions only of the lots needed to repair, rebuild, modify or enlarge, any such buildings, including but not limited to, the addition of garage and living space and construction of appurtenant outbuildings, together with such filling, diking, and/or drainage as may be necessary for the protection of said structures from flood inundation, provided that all construction of any type is consistent with the laws of the Commonwealth of Massachusetts, in compliance with all other zoning requirements, and does not affect the natural flow pattern of any watercourse.

404.20 Determination of Suitability of Residential Piers

New residential piers require a special permit and must conform to the following criteria:

1. The pier shall be located and constructed consistent with safety and navigational concerns.
2. The pier shall not exceed two hundred (200) feet in length and must extend the full distance over any salt marsh used to access the water's edge. The width of the pier shall not exceed four (4) feet.
3. The platform at the seaward end of the pier shall not exceed six (6) feet by ten (10) feet, i.e.: two (2) feet by ten (10) feet wider than the walkway. All pile bents shall be no less than ten (10) feet on center from each other except the last bent on the landward end.
4. The most seaward piles shall not extend more than two (2) feet seaward of the salt marsh except to allow the attached float to be located seaward of any vegetation.
5. Floats attached to piers shall not exceed two hundred (200) square feet unless permitted by the Duxbury Conservation Commission and the Duxbury Harbormaster.
6. Rails shall not exceed thirty-six (36) inches in height off the pier and shall have a top rail five (5) inches or less in vertical dimension and a mid-rail three and one-half (3 ½) inches or less in vertical dimension.
7. Piers, floats and gangways must be made principally out of wood or other materials of a color and reflective quality similar to natural wood.
8. All new piers shall be setback twenty-five (25) feet from abutting property lines unless this single requirement would otherwise prevent a new pier from being approved. In no case shall the setback be less than fifteen (15) feet.
9. All new piers shall be located no closer than fifty (50) feet from the nearest sideline of a Town Landing or Way to the Water.
10. New piers shall be constructed no higher above the salt marsh than the minimum standard for construction permitted by State and Federal regulations. The height of the pier deck shall not exceed fifteen (15.0) feet mean low water unless required by Federal or State regulations.
11. A reconstruction of a pre-existing residential pier does not need to comply with the above requirements; however the reconstructed pier shall conform to these requirements in as much as the pre-existing pier did.

404.30 Reconstruction of a Pre-existing Pier

The reconstruction of a Pre-existing Pier that has been licensed under Chapter 91 and recorded at the Registry of Deeds shall be reconstructed with design standards as approved in the Chapter 91 license. In the event such pier does not have a Special Permit, subject to the provisions of 404.2 (11.), the Zoning Board of Appeals shall accept the design standards as approved in the Chapter 91 license as meeting the requirements of the Zoning Bylaw and issue a Special Permit to such structure.

404.40 Shared Piers

Shared Piers shall comply with all suitability criteria for new piers, except as noted below:

1. All piers constructed, utilizing the shared pier permitting criteria, shall require deed restrictions on each owner's lot prohibiting another pier on those owners' lots and deeded easements granting each owner access to the shared pier, so long as the shared pier in which the owner has rights exists.
2. The Pier location shall not be required to access the water over the shortest distance of salt marsh coverage. The pier may be located on one (1) or more lots and may cross any internal lot lines of the owners. The pier shall be required to meet the sideline setback of the property lines of abutting properties.
3. Float sizes of two hundred (200) square feet per owner shall be permitted up to a maximum of six hundred (600) square feet total, unless permitted by the Duxbury Conservation Commission and the Duxbury Harbormaster.

404.50 Waterfront Scenic Area Overlay District (WSA)

Any new pier in the WSA shall comply with the following special criteria in addition to the other applicable criteria in Section 404.20:

1. A pre-existing pier shall not be reconstructed as a new pier unless the cost to repair the existing pier is greater than fifty percent (50%) of the cost of a new pier on the same footprint.
2. Repairs to a pre-existing pier shall be made subject to no increase in pier length, height, width, footprint or modification of the railing dimension.
3. New piers shall be limited to three and one-half (3.5) feet in width, may have a handrail only on one (1) side of the pier with its upper rail member having a profile of no greater than one and one-half (1.5) inches viewed horizontally and a mid-rail member having a profile of no greater than one-quarter ($\frac{1}{4}$) inch viewed horizontally.
4. New piers shall be constructed no higher above the salt marsh than the minimum standard for construction permitted by State and Federal regulations.

405 PUBLICLY OWNED LAND OVERLAY DISTRICT

This district consists of land owned by the Town and voted by a Town Meeting to be added to this district and shown on the Zoning Map. The municipal uses of this publicly owned land are as established by vote of a Town Meeting, and, if that vote includes action to amend the zoning map, such land is shown on the Duxbury Zoning Map. In accordance with Section 401, all buildings and structures for approved municipal uses shall meet all applicable dimensional, density, and design requirements of this Bylaw.

406 AQUIFER PROTECTION OVERLAY DISTRICTS

406.1 Findings

The Town of Duxbury finds that:

1. The ground water underlying this Town is the sole source of its existing and future drinking water supply. The ground water aquifer is integrally connected with, and flows into, the surface waters, lakes, streams and coastal estuaries which constitute significant recreational and economic resources of the Town used for bathing and other water-related recreation, shellfishing and fishing.
2. Accidental spills and discharges of petroleum products and other toxic and hazardous materials and sewage discharge have repeatedly threatened the quality of such groundwater supplies and related resources throughout towns in Massachusetts, posing potential public health and safety hazards and threatening economic losses to the affected communities.

406.2 Aquifer Protection Overlay Districts

There are hereby established within the Town certain groundwater protection areas consisting of aquifers or recharge areas and approved Zone I, Zone II and Zone III areas which are shown on a map entitled "Aquifer Protection Districts, Town of Duxbury dated March 24, 1993" being an amendment of the Aquifer Protection District Map dated December 4, 2002. This map is hereby made a part of the Duxbury Zoning Bylaw and is on file in the office of the Town Clerk. The Aquifer Protection Overlay Districts, as shown on the maps described above, as well as the above-noted Zone I, II and III areas, shall be considered to be superimposed over any other district established in this Bylaw.

406.3 Relationship to Other Laws

This Bylaw is supplementary to other laws and Bylaws within Duxbury. Where this Bylaw or any portion thereof imposes a greater restriction than is imposed by other regulations, the provisions of this Bylaw shall control. Where this Bylaw references statutes or regulations promulgated by the Commonwealth or its agencies, the statute or regulation shall be that in effect as of January 1, 2002.

406.4 Determination of Location with the Aquifer Protection Overlay District

In determining the location of properties and facilities within the Aquifer Protection Overlay District, the following rules shall apply:

1. Properties located wholly within one (1) zone reflected on the Aquifer Protection Overlay District maps shall be governed by the restrictions applicable to that zone.
2. Properties located such that the site lies within more than one (1) zone as reflected on the Aquifer Protection Overlay District maps shall be governed by the restrictions applicable to the zone in which the activity, structure or sewage disposal system is located.

406.5 Definitions

"Applicant" means any person filing an application.

"Department" means the Massachusetts Department of Environmental Protection (DEP).

"Person" means any agency or political subdivision of the federal government or the Commonwealth, any state, public or private corporation or authority, individual, trust, firm, joint stock company, partnership, association, or other entity, and any officer, employee, or agent or such person, and any group of persons.

"Toxic or Hazardous Materials" means any substance or mixture of such physical, chemical or infectious characteristics as to pose a significant, actual or potential hazard to water supplies, or other hazard to human health, if such substance or mixture were discharged to land or waters of this Town. Toxic or hazardous materials include, without limitation, organic chemicals, petroleum products, heavy metals, radio-active or infectious wastes, acids and alkalis, and include products such as pesticides, herbicides, solvents and thinners. Waste generated by the following activities, without limitation, are presumed to be toxic or hazardous unless and except that anyone engaging in such an activity can demonstrate this contrary to the satisfaction of the Board of Health and the Water Advisory Board.

- Airplane, boat and motor vehicle service and repair
- Chemical and bacteriological laboratory operation
- Cabinet making
- Dry cleaning
- Electronic circuit assembly
- Metal plating, finishing and polishing
- Motor and machinery service and assembly
- Painting, wood preserving and furniture stripping
- Pesticide and herbicide application
- Photographic processing
- Printing

"Zone I" means the four hundred (400) foot protective radius required by the Department around a public water supply well or wellfield.

"Zone II" means that area of an aquifer which contributes water to a well under the most severe pumping and recharge conditions that can be realistically anticipated (one hundred eighty [180] days of pumping at safe yield, with no recharge from precipitation), as defined in 310 CMR 22.00. It is bounded by the groundwater divides, which result from pumping the well, and by the contact of the aquifer with less permeable materials such as till or bedrock. In some cases, streams or lakes may act as recharge boundaries. In all cases, Zone II shall extend upgradient to its point of intersection with prevailing hydrogeologic boundaries (a groundwater flow divide, a contact with till or bedrock, or a recharge boundary).

"Zone III" means that land area beyond the area of Zone II from which surface water and groundwater drain into Zone II, as defined in 310 CMR 22.00. The surface drainage area as determined by topography is commonly coincident with the groundwater drainage area and will be used to delineate Zone III. In some locations, where surface and groundwater drainage are not coincident, Zone III shall consist of both the surface drainage and the groundwater drainage areas.

406.6 Prohibited Uses and Structures

Land in an Aquifer Protection Overlay District may be used for any purpose otherwise permitted in the underlying district, subject to the additional restrictions presented herein. This Bylaw shall not apply to land or activities located outside of the corporate boundaries of the Town, but shall apply to Zones I, II and/or III areas to wells located in adjacent municipalities that fall within the Town.

Within the Aquifer Protection Overlay District, the following uses are specifically prohibited:

1. Sanitary landfills.
2. Junkyards.
3. Municipal sewage treatment facilities with on-site disposal of primary or secondary-treated effluent.
4. Package sewage treatment plants.
5. Car washes.
6. Road salt stockpiles.
7. Dumping of snow from outside the district.
8. Dry cleaning establishments.
9. Boat and motor vehicle service and repair.
10. Metal plating.
11. Chemical and bacteriological laboratories.
12. All underground storage tanks.
13. Any other use which involves, as a principal activity, the manufacture, storage, use, transportation or disposal of toxic or hazardous materials, except as allowed by special permit in Section 406.8 below.

In addition, the following uses as contained in 310 CMR 22.00 et seq. are prohibited within the Aquifer Protection Overlay District:

14. Automobile graveyards and junkyards, as defined in G. L. c. 140B, sec. 1.
15. Stockpiling and disposal of snow or ice removed from highways and streets located outside of Zone II that contains sodium chloride, chemically treated abrasives or other chemicals used for snow and ice removal.
16. Storage of sodium chloride, chemically treated abrasives or other chemicals used for removal of ice and snow on roads, unless such storage is within a structure designed to prevent the generation and escape of contaminated runoff or leachate.
17. Storage of commercial fertilizers, as defined in G. L. c. 128, sec. 64, unless such storage is within a structure designed to prevent the generation and escape of contaminated runoff or leachate.
18. Storage of animal manure, unless such storage is covered or contained in accordance with the specifications of the Natural Resource Conservation Service.
19. Landfills and open dumps, as defined in 310 CMR 19.006.
20. Landfills receiving only wastewater residuals and/or septage approved by the Department pursuant to G. L. c. 21 sec. 26-53; G. L. c. 111, sec. 17; G. L. c. 83, sec. 6-7; and any regulations promulgated thereunder.
21. Petroleum, fuel oil and heating oil bulk stations and terminals, including, but not limited to, those listed as of January 1, 2002 under Standard Industrial Classification (SIC) Codes 5171 and 5983. SIC Codes are established by the U.S. Office of Management and Budget and may be determined by referring to the publication, Standard Industrial Classification Manual, and any subsequent amendments thereto.
22. Treatment or disposal works subject to 314 CMR 5.0 for wastewater other than sanitary sewage. This prohibition includes, but is not limited to, treatment or disposal works related to activities under the Standard Industrial Classification (SIC) Codes set forth in 310 CMR 15.004(6) Title 5, except the following:
 - (i) publicly owned treatment works (POTWs).
23. Individual sewage disposal systems handling more than 110 gallons per day per 10,000 square feet of land area.
24. Facilities that generate, treat, store or dispose of hazardous waste that are subject to G. L. c. 21C and 310 CMR 30.000 except for the following:
 - (i) very small quantity generators, as defined by 310 CMR 30.00,
 - (ii) household hazardous waste collection centers or events operated pursuant to 310 CMR 30.390, or
 - (iii) waste oil retention facilities required by G. L. c. 21, sec. 52A.
25. Treatment works approved by the Department designed in accordance with 314 CMR 5.00 for the treatment of contaminated ground or surface waters.
26. Any floor drainage systems in existing facilities, in industrial or commercial process areas or hazardous material and/or hazardous waste storage areas, which discharge to the ground without a Department permit or authorization.

Any existing facility with such a drainage system shall be required to either seal the floor drain (in accordance with the State Plumbing Code, 248 CMR 2.00), connect the drain to a municipal sewer system (with all appropriate permits and pre-treatment), or connect the drain to a holding tank meeting the requirements of all appropriate DEP regulations and policies.

27. Storage of sludge and septage, as defined in 310 CMR 32.05, unless such storage is in compliance with 310 CMR 32.30 and 310 CMR 32.31.

28. Storage of liquid hazardous materials, as defined in G. L. c. 21E, and/or liquid petroleum products unless such storage is:

(i) above ground level, and

(ii) on an impervious surface; and either (i) in container(s) or above-ground tank(s) within a building, or (ii) outdoors in covered container(s) or above-ground tank(s) in an area that has a containment system designed and operated to hold either ten percent (10%) of the total possible storage capacity of all containers, or one hundred ten percent (110%) of the largest container's storage capacity, whichever is greater; however, these storage requirements shall not apply to the replacement of existing tanks or systems for the keeping, dispensing or storing of gasoline provided the replacement is performed in a manner consistent with state and local requirements.

29. Land uses that result in the rendering impervious of more than fifteen percent (15%) or two thousand five hundred (2,500) square feet of any lot, whichever is greater, unless a system for artificial recharge of precipitation is provided in accordance with Best Management Practices.

30. The removal of soil, loam, sand, gravel or any other mineral substances within six (6) feet of the historical high groundwater table elevation (as determined from monitoring wells and historical water table fluctuation data compiled by the United States Geological Survey, except for excavations for the construction of building foundations or the installation of utility works.

31. Commercial outdoor washing of vehicles.

32. Commercial car washes.

33. Motor vehicle repair operations.

34. Solid waste combustion facilities or handling facilities as defined at 310 CMR 16.00.

406.7 Density Regulations

Residential dwellings shall be permitted at a density not to exceed one (1) dwelling unit per sixty thousand (60,000) square feet of upland lot area as defined in Section 300, providing:

1. The individual on-site wastewater disposal system does not exceed one hundred ten (110) gallons per day design flow for each ten thousand (10,000) square feet of upland, and

2. All land uses, buildings, and accessory structures shall not render impervious more than fifteen percent (15%) or two thousand five hundred

(2,500) square feet of any lot, whichever is greater, unless a system of artificial recharge of precipitation is provided in accordance with Best Management Practices.

406.8 Uses and Structures Permitted By Special Permit

Within the Aquifer Protection Overlay District, the following shall be allowed only upon receipt of a special permit:

1. Any use involving toxic or hazardous materials in quantities greater than associated with normal household use.
2. Golf courses, either private or public use.
3. Residential Conservation Cluster Developments permitted by Section 540.

406.9 Special Permits

1. **Special Permit Granting Authority.** The special permit granting authority (SPGA) under Section 406 of this Bylaw shall be the Planning Board. Such special permit shall be granted if the SPGA determines in conjunction with other Town agencies as specified in Section 406.9.2 below, that the intent of the Bylaw as well as its specific criteria are met. In making such determination, the SPGA shall give consideration to the simplicity, reliability and feasibility of the control measures proposed and the degree of threat to water quality that would result if the control measures failed. The SPGA shall explain any departures from the recommendations of other Town agencies in its decision.

2. **Review by Other Town Agencies.** Upon receipt of the special permit application the SPGA shall transmit one (1) copy to the Director of Public Works, the Water Advisory Board, the Town Manager, the Zoning Enforcement Officer, the Board of Health, the Conservation Commission, and any other relevant Town board/agency or department for their written recommendations. Failure to respond in writing within thirty (30) days shall indicate approval or no desire to comment by said agency. The applicant shall furnish the necessary number of copies of the application.

3. **Special Permit Criteria.** Special Permits under Section 406.8 shall be granted only if the SPGA determines in conjunction with the comments from the above noted agencies that ground-on-site operations will not fall below Federal or State standards for drinking water at the down gradient property boundary, except for nitrate nitrogen which shall not exceed five (5) parts per million.

4. The SPGA may withhold approval of a special permit for the construction of any new structures or structures intended for residential use requiring a special permit under Section 406.8 (Residential Conservation Cluster) which are located on a lot or lots that lie within a zoned Aquifer Protection Overlay District if, after weighing all pertinent facts and evidence the SPGA finds that:

- a) The existing condition of the receiving waters is at or above critical eutrophic levels or in case of well recharge areas, nitrate nitrogen concentration in the groundwater exceed five (5) parts per million, and;
- b) The nutrient combination from the proposed development, when added to the existing and potential nutrient level of developments within the specific recharge area, will generate on a pounds per acre basis, nutrient waters' critical eutrophic level or, in the case of well recharge area, nitrate nitrogen concentrations in the groundwater in excess of five (5) parts per million. It shall be the responsibility of the applicant to demonstrate to the SPGA that proposed mitigating measures will work as designed, and the SPGA may require the applicant to demonstrate on an annual basis that the said mitigating measures are operating satisfactorily.

5. Submittals. In applying for a special permit required by this section, the information listed below shall be submitted.

- a) A complete list of all chemicals, pesticides, fuels and other potentially toxic or hazardous materials to be used or stored on the premises in quantities greater than those associated with normal household use, accompanied by a description of methods proposed to protect all storage containers/facilities from vandalism, corrosion and leakage, and to provide for control of spills.
- b) A description of potentially toxic or hazardous wastes to be generated, indicating storage and disposal methods.
- c) Evidence of approval by the Massachusetts Department of Environmental Protection (DEP) of any industrial waste treatment or disposal system of any wastewater treatment system over ten thousand gallons per day capacity.
- d) Projections of downgradient concentrations of nitrogen and other relevant chemicals at property boundaries and other locations deemed pertinent by the SPGA. Projections shall be based upon appropriate groundwater models and the following information/standards;
 - (i) Nitrogen Loading Calculations:
 - Wastewater per person: five pounds (5 lbs.) nitrogen per year; twenty-five pounds (25 lbs.) phosphorus per year.
 - Persons per dwelling unit = three (3).
 - Lawn Fertilizers: Three pounds (3 lbs.) nitrogen per one thousand (1,000) square feet of lawn (assume 15,000 square feet of lawn area).
 - Road Run-off: 0.19 lbs. nitrogen per curb mile per day.
 - Background Nitrogen Concentration: Actual field measurements.
 - (ii) Groundwater Flow and Impacts to Drinking Water Supply Wells:
 - Identify probable impacted water supply wells by constructing flow lines downgradient of the proposed site on the Duxbury Water Table Map (1986).
 - Recharge Rate: Sixteen (16) inches per year for sand and gravel; nine (9) inches per year for till.

- Hydraulic Conductivity: Listed value for closest downgradient public supply well in Duxbury Aquifer Protection Plan (1986).
 - Saturated Thickness: Saturated Thickness Map (1986) supplemented by site-specific borings.
 - Groundwater Gradient: Duxbury Water Map (IEP, 1986) supplemented with site-specific measurements.
- e) Analysis of Development Impact which at a minimum includes the following:
- (i) The existing conditions of the waterbody or water supply, including physical characteristics and water chemistry.
 - (ii) The expected change in the condition of the water supply as a result of the proposed development.
 - (iii) The comparison, on a per acre basis, of the total nutrient loading from the proposed development with:
 - The existing and potential loading from all other developments and acreage within the recharge area of the water supply of the waterbody.
 - The loading rate which would be expected to produce critical eutrophic levels in a waterbody or in the case of a water supply the loading rate which would produce nitrate nitrogen levels in excess of five (5) parts per million in the groundwater.
 - (iv) In determining the impact of nutrient loading from a development, the following standards and definitions shall be used:
 - Loading per person: five (5) pounds nitrogen per person per year; twenty-five (25) pounds phosphorus per person per year for sewage disposal systems within three hundred (300) feet of the shoreline.
 - Loading from lawn fertilizers: three (3) pounds nitrogen per one thousand (1,000) square feet of lawn area per year.
 - Loading from road runoff: 0.19 pounds nitrogen per curb mile per day; 0.15 pounds phosphorous per curb mile per day.
 - Critical eutrophic levels: fresh water concentrations; total nitrogen: 0.75 mg/liter.

406.10 Design and Operations Guidelines

The following design and operation guidelines shall be observed within the Aquifer Protection Overlay District.

1. Safeguards. Provisions shall be made to protect against toxic or hazardous materials discharge or loss resulting from corrosion, accidental damage, spillage or vandalism through measures such as: prohibition of underground fuel storage tanks; spill control provisions in the vicinity of chemical or fuel delivery points; secured storage areas for toxic or hazardous materials; and indoor storage provisions for corrodible or dissolvable materials. For operations which allow the evaporation of toxic or hazardous

materials into the interiors of any structures, a closed vapor recovery system shall be provided for each such structure to prevent discharge of contaminated condensate into the ground water.

2. Location. Where the premises are partially outside of the Aquifer Protection Overlay District, potential pollution sources such as on-site waste disposal systems shall be located outside the district to the extent feasible.

3. Disposal. For any toxic or hazardous wastes to be produced in quantities greater than those associated with normal household use, the applicant must demonstrate the availability and feasibility of disposal methods that are in conformance with G. L. c. 21C.

4. Drainage. All runoff from impervious surfaces shall be recharged on the site diverted toward areas covered with vegetation for surface infiltration to the extent possible. Dry wells shall be used only where other methods are not feasible and shall be preceded by oil, grease, and sediment traps to facilitate removal of contaminants.

406.11 Violations

The Zoning Enforcement Officer shall provide written notice of any violation of this Bylaw to the owner of the premises, specifying the nature of the violations and a schedule of compliance, including cleanup of any spilled materials. This compliance schedule must be reasonable in relation to the public health hazard involved and the difficulty of compliance. In no event shall more than thirty (30) days be allowed to either compliance or finalization of a plan for longer-term compliance.

406.12

The provisions of this Bylaw shall not apply to lands in excess of five (5) acres actively devoted to agriculture, horticulture, floriculture or viticulture, nor to use of pesticides when used on such lands in accordance with G. L. c. 132b.

410 RESIDENTIAL COMPATIBILITY DISTRICT

410.1 Permitted Uses and Structures

Residential Compatibility District shall include all areas designated on the Duxbury Zoning Map dated March 13, 1973 as revised and amended to date on file in the office of Town Clerk, as Residential Compatibility District established by Section 201. The following regulations shall apply.

In a Residential Compatibility District no building or accessory structure shall be erected or altered and no building, accessory structure or land shall be used for any purpose or in any manner other than is permitted and set forth herein.

1. Detached, single-family dwelling.
2. Religious.
3. Educational.

4. Accessory use and accessory structures on the same lot which are customarily incidental to a single-family residence.
5. Trailer for a temporary residential occupancy only for a period totaling not more than six (6) months on a premises whose dwelling has been destroyed by fire with a permit from the Zoning Enforcement Officer.
6. The keeping of one (1) service type vehicle not to exceed ten thousand (10,000) pounds gross weight by a resident who carries on a trade or profession away from his/her premises.

410.2 Prohibited Uses and Structures

1. Garage, attached or unattached, for the storage of more than three (3) vehicles.
2. Use of a trailer coach, travel trailer, motor home, tent trailer or mobile home on a residential lot.
3. Except on a farm, outdoor storage of any unregistered motor vehicle for more than ninety (90) days.
4. Advertising signs, as regulated by Section 601, except temporary signs pertaining to the lease, sale, or rental of a lot or building on which they are placed and not exceeding six square feet in area, or as allowed by Section 410.7(b).
5. Any use which will produce a nuisance or hazard from fire or explosions, toxic or corrosive fumes, gas, smoke, odors, obnoxious dust or vapor, harmful radio-activity, offensive noise or vibration, flashes, objectionable effluent, or electrical interference which may affect or impair the normal use and peaceful enjoyment of any property in Town.
6. Parks for trailers, travel trailers, tent trailers, trailer coaches and motor homes; auto dismantling, junkyards, privately developed and operated septage waste disposal/treatment facilities and refuse disposal facilities are expressly prohibited.
7. Planned Development.

410.3 Uses and Structures Permitted by Special Permit

The following uses and structures are permitted, and only to the extent authorized, by a Special Permit from the Board of Appeals. The Planning Board shall be the Special Permit Granting Authority for Residential Conservation Cluster Developments:

1. Stand for the sale of produce raised on the premises.
2. Home occupation in accordance with Section 410.7.
3. Conversion of a single-family dwelling in existence for ten (10) years prior to the application for a special permit in accordance with Section 410.6.
4. Cemetery.
5. Golf course.
6. Hospital, convalescent home, sanatorium, institution, including a continuing care or similar assisted living retirement facility for persons age 62 and over operated in connection with a skilled nursing facility subject to state

licensure. Any such use to be reviewed pursuant to the applicable provisions of Article 800 of the Protective Bylaw, or philanthropic use.

7. Riding stable.
8. Bed and Breakfast within existing footprint of an existing single-family dwelling, in which the operator resides.
9. Private club not conducted for profit and not containing sleeping quarters for more than four (4) persons.
10. Residential Conservation Cluster Development in accordance with Section 540.
11. Wireless Telecommunications Services Facility in accordance with Section 610.
12. Veterinary Hospital for the care and treatment of domestic animals.

410.4 Residential Compatibility District Intensity, Dimensional and Coverage Regulations

No building or structure shall be located, constructed, changed, enlarged or permitted and no use of premises in Residential Compatibility District shall be permitted except in conformity to the intensity and dimensional regulations as set forth herein. If a lot is determined by the rules of Section 406.4 to be within an Aquifer Protection Overlay District, then the more restrictive regulations of Section 406 Aquifer Protection Overlay District shall prevail.

Lot Size/Lot Frontage – In a Residential Compatibility District no dwelling shall be erected on a lot unless such lot has an area of forty thousand (40,000) square feet or more of upland and shall have a frontage measurement on a way equal to or greater than two hundred (200) feet. Frontage cannot accrue from a limited access highway.

Lot Area – The horizontal and contiguous area of the lot exclusive of any area in a public or private way open to the public uses. Land under any waterbody, bog, swamp, wet meadow or marsh, as defined in G. L. c. 131 sec. 40, and/or land within the Wetlands Protection Overlay District and/or land within any overhead easement the purpose for which is the transmission of high voltage electricity, shall not be included in the horizontal and contiguous portion of the lot area required for zoning compliance. If the distance between any two (2) points on lot lines is less than fifty (50) feet, measured in a straight line, the smaller portion of the lot, as divided by that line, shall not be included in lot area unless the two points are separated by less than one hundred fifty (150) feet along lot line. (See drawing in section 300.)

Lot Shape – The following shall apply to all lots for residential use except those created under special permits, such as created in Planned Development and Residential Conservation Cluster Developments.

1. Lot width shall be at least one hundred sixty (160) feet at the required setback line, to the way. (1987)

2. The lot shall contain at least four thousand five hundred (4,500) square feet between the required setback line and the right-of-way line from which the lot takes its frontage.

3. Each single-family dwelling shall be located on a lot containing an imaginary circle one hundred fifty (150) feet in diameter within its lot lines. (1987)

Intensity – The maximum density shall be one single family dwelling per 40,000 square feet or more of upland.

Front Setback – In a Residential Compatibility District, where the way is forty (40) or more feet in width, no building, roadside stand, or accessory structure shall be erected or placed within twenty-five (25) feet of a right-of-way and if the way is less than forty (40) feet in width no building, roadside stand, or accessory structure shall be erected or placed within forty-five (45) feet from the center line of the way. Where present buildings on adjoining lots are less than twenty-five (25) feet from the right-of-way line, new buildings may be placed as near the right-of-way lines as the average of the buildings on said adjoining lots.

In a Residential Compatibility District, the minimum front setback shall be measured from a right-of-way line of the way giving legal access to any lot where a plan of the way is on file with the Registry of Deeds or, in the absence of such a plan, from a line twenty (20) feet from and parallel with the centerline of the traveled way. In the case of a corner lot, the distance of the front setback shall apply to any structure adjacent to either right-of-way.

Minimum front setbacks shall apply to swimming pools, tennis courts, and other accessory structures.

Side and Rear Setbacks – In a Residential Compatibility District no dwelling or accessory structure, other than a swimming pool or tennis court shall be built within fifteen (15) feet of a side or rear lot line. No swimming pool or tennis court shall be built within ten (10) feet of a side or a rear lot line.

Projections – Nothing herein shall prevent the projection of steps, stoops not exceeding thirty (30) square feet in area, cornices, window sills or belt courses into any setback.

Height – In a Residential Compatibility District, no dwelling shall be more than thirty (30) feet in height. No detached structure or building shall be closer than its height to any other. The limitations of height in feet shall not apply to chimneys, elevators, poles, ventilators, skylight, tanks, bulkheads, and other accessory structural features usually carried above roofs, nor to domes, towers, or spires of churches or other buildings provided such features are in no way used for living purposes and further provided that

no such structural feature of any building shall exceed a height of sixty-five (65) feet from the ground.

Coverage – In a Residential Compatibility District, building coverage as defined in Section 302 shall be no more than fifteen percent (15%) of the total area of the lot (as defined in Section 302 and not “Lot Area”), except that in the case of a lot having a total area of less than twenty thousand (20,000) square feet the Board of Appeals by Special Permit may permit additional building coverage in an amount not greater than three percent (3%) of the difference between the total area of the lot and twenty thousand (20,000) square feet.

Corner Clearance – Within the triangle formed by the lines of intersecting ways and a line joining points on such lines fifteen (15) feet distance from their point of intersection, or in case of a rounded corner, the point of intersection of their tangents, no structure and no foliage shall be maintained between a height of three and one-half (3-1/2) feet and a height of eight (8) feet above the plane through their curb grades.

Reduction of Minimum Requirements – In a Residential Compatibility District no lot, setback, or other open space already having less than the minimum requirements in this Bylaw shall be further divided or reduced with respect to such minimum requirement or requirements.

Parking Regulations for Residential Compatibility District – Off-street parking for a minimum of two (2) motor vehicles shall be provided.

410.5 Residential Plot Plan Required for Building Permit

No building permit shall be issued for new construction, reconstruction, or enlargement of existing residential buildings and other structures without a Site Plan being submitted as part of an application for a building permit and approved by the Zoning Enforcement Officer. In addition to the requirements set forth in Section 905.1, such plot plan shall, to the extent deemed necessary by the Zoning Enforcement Officer or the Board of Appeals, show the dimensions and shape of the lot; delineate any Wetlands Protection Overlay District, Flood Hazard Areas Overlay District or Aquifer Protection Overlay District areas located within the lot; location of all existing and proposed structures or additions; location of existing and/or proposed septic disposal systems including leaching field and reserve area; existing and proposed contours at two foot intervals. The Zoning Enforcement Officer may require additional information or documentation of materials submitted.

410.6 Accessory Apartment Special Permit Regulations and Restrictions

1. General – No accessory apartment shall be constructed in a single family dwelling without a special permit from the Board of Appeals as provided hereunder. For

the purpose of this provision, single-family dwellings authorized under a special permit for a Residential Conservation Cluster or Planned Development shall be ineligible for an accessory apartment. Application for a special permit may be made to the Board of Appeals in the usual manner. The Board of Appeals may grant a special permit under 906.2 and Site Plan approval under 410.5 provided the following conditions are met. No construction shall commence without issuance of a building permit by the Zoning Enforcement Officer and no use or occupancy of the accessory apartment may occur until the Zoning Enforcement Officer has issued a certificate of occupancy.

2. The Board of Appeals may approve an application for a special permit to construct an accessory apartment where:
 - a) The accessory apartment does not exceed eight hundred fifty (850) square feet in area.
 - b) The accessory apartment does not require alteration or addition to the single-family dwelling in such a manner that there is any exterior change to the dwelling, so that the accessory apartment is located wholly within the building footprint in existence at the time of the special permit application. For the purpose of this section, exception shall be made only for installation of exterior doorways and means of egress at grade in conformance with Massachusetts Building Code.
 - c) The area of the lot on which the single-family dwelling is located shall not be less than twenty thousand (20,000) square feet.
 - d) Sufficient parking area shall be provided, including at least one (1) additional space to serve the accessory apartment. Said additional space shall have access to the driveway serving the dwelling.
 - e) The applicant shall be an owner-occupant of the premises, and shall remain an occupant of either the principal dwelling or the accessory apartment.
 - f) The Board of Health certifies that the existing or proposed septic system and expansion area comply with the requirements of Title 5 of the State Environmental Code and the Rules and Regulations of the Duxbury Board of Health, and is capable of serving both the single-family dwelling and the accessory apartment.
 - g) The applicant submits floor plans of the proposed accessory apartment, a site plan in conformance with Section 410.5 and a plot plan as required under Section 905, all being acceptable to the Board of Appeals.
 - h) The single-family dwelling is at least ten (10) years old at the time of the application for an accessory apartment special permit, and no additions or alterations as would have created additional living space were constructed in the single-family dwelling within one (1) year of the date of application for special permit hereunder.
 - i) Upon approval, the Board of Appeals may require the applicant to record a restriction at the Plymouth County Registry of Deeds verifying that the apartment is accessory to a single-family dwelling and that no application shall be made under Chapter 183A to convert the accessory apartment to a condominium.

410.7 Home Occupation Special Permit Regulations

1. In a Residential Compatibility District, the Board of Appeals may issue a special permit for the use of a portion of a dwelling as a principal location for the practice of their occupation by a person (such as an architect, counselor, consultant, dentist, doctor, engineer, insurance broker, investment counselor, lawyer or real estate broker) who is a resident therein, provided that:

- a) The home occupation use shall be clearly incidental and subordinate to the residential use and not more than twenty-five percent (25%) of the floor area of the dwelling shall be devoted to the home occupation use;
- b) There shall be no change in the exterior appearance of the premises, nor any visible evidence of the conduct of the home occupation other than one (1) non-illuminated sign not to exceed two (2) square feet in area if such sign has been allowed under a special permit granted by the Board of Appeals;
- c) A special permit has been granted by the Board of Appeals under the standards of Section 906.2.

2. A home occupation, which will have no clients or pupils calling, will have no extraordinary deliveries of mail or packages, will have no signage, and will employ only residents of the dwelling, may obtain a permit for such use from the Zoning Enforcement Officer.

420 NEIGHBORHOOD BUSINESS DISTRICTS

The Town shall have designated Neighborhood Business Districts as established by Section 201, described herein and as shown on the Zoning Map dated March 13, 1973 as revised and amended to date and on file in the office of the Town Clerk, and as defined in and subject to Section 421, through and including Section 425.

421-A NEIGHBORHOOD BUSINESS LIGHT DISTRICT

The Town shall have a Neighborhood Business Light District (NB-L) as established by Section 201, described herein and as shown on the Zoning Map dated March 13, 1973 as revised and amended to date and on file in the office of the Town Clerk, and as defined in and subject to this Section 421A.

General: No structure shall be erected or altered and no building, structure, premises or land shall be used for any purpose or in any manner other than as permitted as follows:

421A.1 Permitted Uses and Structures

1. Uses and structures as permitted by Section 410.1 and 410.3 in accordance with all intensity, dimensional, and coverage regulations of Section 410.4.

2. Signs in accordance with Section 601.
3. The keeping of any registered commercial motor vehicle.

421A.2 Prohibited Uses and Structures

1. Any use which will produce a nuisance or hazard from fire or explosion, toxic or corrosive fumes, gas, smoke, odors, obnoxious dust or vapor, harmful radioactivity, offensive noise or vibration, flashes, objectionable effluent or electrical interference which may affect or impair the normal use and peaceful enjoyment of any property, structure or dwelling in Town. Parks for trailers, travel trailers, tent trailers, trailer coaches and motor homes, auto dismantling, junkyards, privately developed and operated septage waste disposal/treatment facilities are expressly prohibited.
2. All Neighborhood Business 2 Structures, and all Neighborhood Business 1 Structures not otherwise listed in Section 421A.3.
3. In NB Light, no drive-through establishment, drive-through business or drive-through restaurant use shall be allowed.

421A.3 Uses and Structures That May Be Permitted Subject to Special Permit and Site Plan Requirement

The following uses shall only be permitted by a special permit from the Board of Appeals when the off-street parking requirement is more than three (3) vehicles and/or off-street loading space is required. If the off-street parking requirement is less than three (3) vehicles and no off-street loading space is required, the Zoning Enforcement Officer may approve the following uses, provided that the provisions of Section 424.2 are complied with:

1. Professional office for dental, architectural, engineering, renewable and alternative energy research and development, legal, medical, and other similar recognized professions; medical and dental clinics, including retail uses accessory thereto providing no more than twenty-five percent (25%) of the rentable floor space in a principal building exclusive of all storage areas is used therefor.
2. Real estate, insurance and general business office, banks, telephone office.
3. Dwelling in a business structure above the ground floor.
4. Greenhouse that is accessory to a business.

421A.4 Special Permit Uses

1. Retail sale of food items, including confectionery, dairy products, fruits, vegetables, groceries and meats.
2. Sale of baked goods and the manufacture of same for sale.
3. Sale of dry goods, variety merchandise and handicraft work.
4. Sale of clothing and clothing accessories.

5. Sale of hardware, household items including appliances, furniture, furnishings and supplies.
6. Sale of printed matter, drugs, stationery and photographic supplies.

421 NEIGHBORHOOD BUSINESS DISTRICT 1: USE AND REGULATIONS

General: In Neighborhood Business District 1, no structure shall be erected or altered and no building, structure, premises or land shall be used for any purpose or in any manner other than as permitted as follows.

421.1 Permitted Uses and Structures

1. Uses and structures as permitted by Section 410.1 and 410.3 in accordance with all intensity, dimensional, and coverage regulations of Section 410.4.
2. Signs in accordance with Section 601.
3. The keeping of any registered commercial motor vehicle.

421.2 Prohibited Uses and Structures

1. Any use which will produce a nuisance or hazard from fire or explosion, toxic or corrosive fumes, gas, smoke, odors, obnoxious dust or vapor, harmful radioactivity, offensive noise or vibration, flashes, objectionable effluent or electrical interference which may affect or impair the normal use and peaceful enjoyment of any property, structure or dwelling in Town. Parks for trailers, travel trailers, tent trailers, trailer coaches and motor homes, auto dismantling, junkyards, privately developed and operated septage waste disposal/treatment facilities are expressly prohibited.
2. All Neighborhood Business District 2 structures and uses.

421.3 Uses and Structures That May Be Permitted Subject to Special Permit and Site Plan Requirement

The following uses shall only be permitted by a special permit from the Board of Appeals when the off-street parking requirement is more than three (3) vehicles and/or off-street loading space is required. If the off-street parking requirement is less than three (3) vehicles and no off-street loading space is required, the Zoning Enforcement Officer may approve the following uses, provided that the provisions of Section 424.2 are complied with:

1. Uses allowed in NB Light and as described in Section 421A.3.
2. Public transportation passenger station and right-of-way passenger bus terminal.
3. Shop of an electrician, painter, paper-hanger, plumber, upholsterer, carpenter or cabinet-maker and similar trades.

421.4 Special Permit Uses

1. Special Permit Uses allowed in NB Light and as described in Section 421A.4.

2. Wireless Telecommunications Services Facility in accordance with Section 610.
3. Service establishment: barber and beauty shop, laundry agency, shoe and hat repair, bicycle and household appliance repair, dressmaking, dry cleaning and pressing or tailor shop where no work is done on the premises for retail outlets elsewhere.
4. Mortuary and funeral parlor.
5. Restaurant and other places for serving of food or beverages inside or outside the building at tables or counters, including public or private clubs.
6. Take-out food establishment or delicatessen where food is prepared but not consumed on the premises and sold retail; catering services.

422 NEIGHBORHOOD BUSINESS DISTRICT 2: USE AND REGULATIONS

General: In a Neighborhood Business District 2, no structure shall be erected or altered and no building, structure, premises or land shall be used for any purpose or in any manner other than as permitted as follows.

422.1 Permitted Uses

All uses permitted in Section 421A.1 (Neighborhood Business Light District) and section 421.1 (Neighborhood Business District 1) shall be permitted in Neighborhood Business District 2. Permitted signs shall comply in all respects with the requirements of Section 601.

422.2 Prohibited Uses and Structures

Any use which will produce a nuisance or hazard from fire or explosion, toxic or corrosive fumes, gas, smoke, odors, obnoxious dust or vapor, harmful radioactivity, offensive noise or vibration, flashes, objectionable effluent or electrical interference which may affect or impair the normal use and peaceful enjoyment of any property, structure or dwelling in Town. Parks for trailers, travel trailers, tent trailers, trailer coaches and motor homes, auto dismantling, junkyards, privately developed and operated septage waste disposal/treatment facilities are expressly prohibited.

422.3 Uses and Structures Permitted by Special Permit

The following uses shall only be permitted by a Special Permit issued by the Board of Appeals subject to all regulations and site plan approval for Neighborhood Business Districts.

1. All uses and structures permitted by special permit in Sections 421A.4, 421.3 and 421.4.
2. Retail business, services or public utility not involving manufacture on the premises, except of products, the major portion of which is to be sold at retail by the manufacturer to the consumer and provided further that no more than ten (10) operators shall be employed in such manufacture. Such retail businesses may include

sales at wholesale, provided that the physical incidents (wholesale transactions) occurring on the premises are of substantially the same character as the physical incidents of its retail sale direct to the consumer and provided further that the major portion in number of its sales shall continue to be retail sales.

3. Automobile sales and services provided that, where it is proposed to dispense, sell or offer for sale, motor fuels directly to users of motor vehicles, all of the following criteria must be met:

- a) There is no existing salesroom, service station, garage or other establishment dispensing motor fuels within one thousand three hundred (1,300) feet;
- b) No public or private playfield or playground, church or other places of public worship, cemetery, police station, fire station, hall or other place of public assembly, municipal building used for public business meetings or assemblies, Town-owned sites held for future schools, playgrounds or playfields is within five hundred (500) feet of the proposed facility;
- c) A landscaped safety island parallel to the street line sixty (60) feet in length along the street and twenty-five (25) feet in depth shall be provided;
- d) On either end of this island, "curb cuts" or access drives of not more than thirty (30) feet and not less than twenty-five (25) feet in width at the exterior of the street shall be provided;
- e) No more than three (3) pumps and/or hoses in one "island" for dispensing leaded gasoline or motor fuel, plus one (1) additional pump and hose for dispensing either diesel fuel or white gasoline, so called, shall be allowed;
- f) The minimum frontage shall be at least one hundred fifty (150) feet.

4. Automobile sales and service including automobile sales, outdoor automobile sales display, service stations, repair and storage garage provided that washing, lubrication and major repair of motor vehicles are performed inside an enclosed building and all dispensing of fuels, lubricants and fluids is done entirely on the property of the business.

5. Boat sales, service and outdoor business and storage provided that major repair of engines is performed inside enclosed buildings and that all dispensing of fuels, lubricants and fluids is done entirely on the property of the business.

6. Sale of building materials.

7. Wireless Telecommunications Services Facility in accordance with Section 610.

424 SPECIAL PERMIT PROCEDURES AND CRITERIA FOR NEIGHBORHOOD BUSINESS DISTRICTS L, 1 AND 2

1. The Special Permit Granting Authority: The special permit granting authority (SPGA) under this Bylaw shall be the Board of Appeals.

2. Requirements: An application for a Neighborhood Business Special Permit shall include a written description of the proposal for which a special permit is requested and a Site Plan prepared by a Registered Professional Engineer and/or

Registered Land Surveyor at an appropriate scale to clearly show dimensions, legend, and all other information deemed necessary to describe the site and its conditions. Three (3) copies of the Site Plan shall be submitted to each of the following boards: Board of Appeals, Planning Board, Board of Health, Conservation Commission, and DPW. One (1) copy shall be submitted to the Zoning Enforcement Officer and the Design Review Board. To the extent to which the following information is necessary to delineate and describe site conditions related to the purpose for which the special permit is requested, said Site Plan shall show, among other things:

- a) all existing and proposed buildings, structures, parking spaces, driveways, driveway openings, service areas, and other uses;
- b) existing and proposed contours at two (2) foot intervals;
- c) proposed clear-sight distances at all driveway openings, existing and proposed ways;
- d) existing and proposed water sources and volumes of use;
- e) existing traffic counts and estimated future traffic volumes;
- f) abutting land uses;
- g) all facilities for disposal of sewerage, storage, and disposal of refuse and other waste disposal;
- h) all facilities for surface water drainage or retention;
- i) all principle landscape features;
- j) where applicable, the limits of any defined Aquifer Protection Overlay District areas and/or Wetlands Protection Overlay District areas as specified in this Bylaw and the Zoning Map; and
- k) all signs, parking and lighting shall be included.

If the proposed business use would add one thousand (1,000) square feet or more of gross floor area to an existing business or would require a total of ten (10) or more parking spaces based upon both existing and new development, or any change of use which under Section 603 requires ten (10) or more parking spaces based only on new business development then the Site Plan shall be governed by the provisions of Section 615.

3. Referral: The Board of Appeals shall refer a special permit application to the Planning Board, the Historical Commission, the Board of Health, the Conservation Commission, Design Review Board, and Water Advisory Board for written comments and recommendations before taking final action on said special permit application. Any board or agency to which applications are referred shall make its recommendations and send copies thereof to the Board of Appeals and the applicant within thirty-five (35) days of receipt of the referral request by said board or agency or there shall be deemed no opposition or desire to comment. The Board of Appeals shall not act upon said special permit until either comments from referred boards or agencies have been received, or said thirty-five (35) days have elapsed, whichever is sooner.

4. Criteria: In approving a special permit under this section, the Board of Appeals shall, to the degree consistent with a reasonable use of the site for the purpose

permitted within a Neighborhood Business District in which it is located, provide for the following:

- a) Protection of adjoining premises against detrimental or offensive uses on the site;
- b) Adequacy of space for vehicular access to the site and off-street parking and loading/unloading on the site;
- c) Convenience and safety of vehicular and pedestrian movement within the site and in relation to adjacent ways and land;
- d) Adequacy of water supplies and distribution for domestic use fire protection;
- e) Adequacy of the methods of storage and disposal for sewage, refuse and other wastes resulting from the uses permitted on the site and the methods of drainage or retention of surface water;
- f) Maintenance and promotion of dispersed shade on paved areas through the effective use of established and/or new trees; and
- g) Conformance to sign regulations in Section 601.

425 INTENSITY AND DIMENSIONAL REGULATIONS FOR ALL NEIGHBORHOOD BUSINESS DISTRICTS

425.1 Lot Area, Frontage, Depth Dimensions and Coverage

- 1. Minimum lot size for NB-L is 30,000 square feet.
- 2. Lot Dimension for NB-L:
 - Frontage 200 linear feet
 - Depth 100 linear feet
 - Front setback 25
 - Side setback 25 to residential use; 0 to NB-1 or NB-2
 - Rear setback 15 to residential use; 0 to NB-1 or NB-2
- 3. Minimum lot size for NB-1 and NB-2 is 15,000 square feet.
- 4. Lot Dimension for NB-1 and NB-2:
 - Frontage 100 linear feet
 - Depth 100 linear feet
 - Front setback 10 linear feet
 - Side setback 0 linear feet
 - Rear setback 0 linear feet
- 5. In a Neighborhood Business District where present buildings are less than forty (40) feet from the right-of way line, new buildings may be placed as near the right-of-way line as the average buildings on said adjoining lots. A vacant lot shall, for this purpose, be treated as though occupied by a building set back forty (40) feet.

6. The minimum front setback shall be measured from the right-of-way giving legal access to any lot where a plan of the way is on file with the Registry of Deeds or, in the absence of such a plan, from a line twenty feet from and parallel with the center line of the traveled way. In the case of a corner lot, the distance of the front setback shall apply to any structure adjacent to either right-of-way.

7. In a Neighborhood Business District, no accessory building or structure shall be located within the required front setback. Accessory structures may be appended to the principal building or to another accessory building.

a) Corner Clearance – Within the triangle formed by the lines of intersecting ways and a line joining points on such lines fifteen feet distance from their point of intersection, or in the case of a rounded corner, the point of intersection, or in the case of a rounded corner, the point of intersection of their tangents, no structure and no foliage shall be maintained between a height three and one-half (3.5) feet and height of eight (8) feet above the plan through their curb grades.

b) Projections – Nothing herein shall prevent the projection of steps, stoops, not exceeding thirty square feet in any area, cornices, window sills or belt courses into any required setback.

c) Height – Maximum height shall be thirty (30) feet in all NB Districts.

d) Exemptions to Height Regulations – The limitations of height in feet shall not apply to chimneys, elevators, poles, ventilators, skylights, tanks, bulkheads, and other accessory structural features usually carried above roofs, nor to domes, towers, or spires of churches or other buildings provided such features are in no way used for living purposes and further provided that no such structural feature of any building shall exceed a height of sixty-five (65) feet from the ground. The Board of Appeals may grant a special permit for greater height for such structures and provided such greater height would not be hazardous or detrimental to the neighborhood.

e) Site Coverage – In all NB Districts the maximum site coverage of a lot shall be no more than fifty percent (50%) of the total area of the lot as defined in Section 302 and not "Lot Area."

f) Bedrooms – Above ground floor apartments in all NB Districts shall be limited to no more than two (2) bedrooms.

g) Reduction of Minimum Requirements – No lot, setback, court or other open space already having less than the minimum requirements in this Bylaw shall be further divided or reduced with respect to such minimum requirement or requirements.

430 PLANNED DEVELOPMENT DISTRICTS

Planned Development District 1, Planned Development District 2, Planned Development District 3 are established by Section 201 of this Bylaw and land zoned Planned Development 1,2, or 3 are designated on the Duxbury Zoning Map dated March 13, 1973 as revised and amended to date.

430.1 Permitted Uses and Structures

Permitted uses and structures in a Planned Development District shall be those permitted by right and by Special Permit in a Residential Compatibility District, Section 410.1 and 410.3, and in accordance with all intensity, dimensional and coverage regulations of Section 410.4.

If any portion of the land of the Planned Development is within the Aquifer Protection Overlay District as determined per Section 406.4, then the stricter intensity, dimensional and coverage regulation of Section 406 shall apply.

430.2 Special Permit Uses

Planned Development as outlined in Section 700 and Section 800 of this Bylaw.

No Planned Developments shall be undertaken without a Special Permit granted by the Board of Appeals as provided for in Section 808 and 906.2 and in accordance with the Design Standards enumerated in Section 700 and Procedures and Regulations for Planned Development as enumerated in Section 800 of this Bylaw.

ARTICLE 500 - REQUIREMENTS FOR CERTAIN LAND DIVISIONS, LAND DEVELOPMENTS, AND INCLUSIONARY HOUSING

530 DIVISION OF LAND AND DEVELOPMENT OF MULTIPLE DWELLINGS

530.1 Purpose

The purpose of this Bylaw is to ensure that land divisions, subdivisions, and developments of multiple dwellings on single lots are afforded the depth and breadth of review allowed by G.L. c. 40A, sec. 9 to adequately protect public health, safety and welfare of the current and future residents of the Town. This Bylaw, in concert with Section 540, 560 and/or 906.2 allows the Board of Appeals or Planning Board to grant a special permit for land divisions, subdivisions and large multi-unit developments, provided specific enumerated criteria are satisfied.

530.2 Applicability

1. The division and/or subdivision of land held in single ownership as of January 1, 2001 or anytime thereafter into six (6) or more lots, or

2. The division of a tract of land greater than ten (10) acres into five (5) or more lots,

shall require a special permit from the Planning Board under the provisions of Section 540, unless application is made under Section 700 of the Zoning Bylaw, in which case the special permit granting authority shall be the Board of Appeals.

3. The construction of six (6) or more dwelling units on land that does not require land division and/or subdivision, whether on one or more contiguous parcels held in single ownership as of January 1, 2001 or anytime thereafter, shall require a special permit from the Board of Appeals under Article 700.

In cases where the proposed division of land is for six (6) or more lots and said division is proposed as a division of land not requiring Planning Board approval (G. L. c. 41, sec. 81-P), the Planning Board's special permit powers shall be limited to enforcing the provisions of Section 560 of the Zoning Bylaw. The provisions of Section 530.2.3 shall not apply to the construction of six (6) or more dwelling units on individual lots, if said six (6) or more lots were in existence as of January 1, 2001.

530.3 Multiple Special Permits

The special permit requirements of Section 530 may be subsumed by the special permit requirement of Sections 406, 540 and 700.

540 RESIDENTIAL CONSERVATION CLUSTER

540.1 Purpose and Intent

1. Allow for greater flexibility and creativity in the design of residential developments.

2. Encourage the permanent preservation of open space, agricultural and forestry land, other natural resources including waterbodies and wetlands, and historical and archeological resources.

3. Maintain the Town's traditional character and land use pattern in which small villages contrast with open land.

4. Protect scenic vistas from the Town's roadways and other places.

5. Encourage screening of new residential development from the Town's roads, open spaces and scenic areas.

6. Facilitate the construction and maintenance of streets, utilities and public services in a more economical and efficient manner.
7. Protect existing and potential municipal water supplies.
8. Encourage a less sprawling and more efficient form of development that consumes less open land and conforms to existing topography and natural features better than a conventional subdivision.
9. Minimize the total amount of disturbance on the site.
10. Preserve open space areas for active and passive recreational use, including the provision of neighborhood parks and trails.
11. Encourage the provision of diverse housing opportunities and the integration of a variety of housing types.
12. Further the goals and policies of the Duxbury Comprehensive Plan.

540.2 Definitions

In this Bylaw, the following words have the meanings indicated:

Residential Conservation Cluster (RCC) Development - A residential development in which the buildings are clustered together with reduced lot sizes and frontage. The land not included in the building lots is permanently preserved as open space. RCC Development is generally the preferred form of residential development and/or redevelopment in the Town for residential developments of five (5) or more acres and/or six (6) or more lots.

540.3 Applicability

A proposed subdivision of land into six (6) or more lots shall be filed in accordance with the provisions of Section 540.4, below. The Planning Board shall determine whether the proposed location is suitable for an RCC Development under the terms and provisions of this section. If the Planning Board determines that the proposed location is suitable for an RCC Development, any further subdivision of the land into six (6) or more lots shall be accomplished only through the provisions of this Bylaw. If the Planning Board determines, after discussion and analysis provoked by Section 540.4, that the location is best suited for subdivision under a conventional subdivision design, the Planning Board shall so inform the applicant and the applicant may then proceed to design a subdivision plan under the provisions of the Subdivision Control Law and the Duxbury Rules and Regulations Governing the Subdivision of Land (Subdivision Rules and Regulations) and the provisions of this section shall not apply. In cases where the Planning Board determines that the site is not suitable for an RCC Development, and where the proposed subdivision of land is for six (6) or more lots, the Planning Board's special permit powers shall be limited to enforcing the provisions of Section 560 of the Zoning Bylaw. In either case, however, a special permit from the Planning Board shall be required.

Notwithstanding the provisions above, the Planning Board may grant a special permit for an RCC Development for any parcel or contiguous parcels of at least five (5) acres in

any district permitting single-family dwellings subject to the regulations and conditions herein.

Determination of whether the proposed location is not suitable for an RCC Development shall be based upon the opinion and judgment of the Planning Board, after consultation with its advisors and staff and may include the following criteria:

1. The degree to which the topography of the locus will not be preserved by a RCC Development;
2. The degree to which stormwater runoff and erosion will not be minimized by a RCC Development;
3. The degree to which the RCC Development will result in inappropriate site planning, subdivision design and/or damage to the site's natural features;
4. The degree to which the RCC Development will not preserve or protect abutting properties and associated views and vistas;
5. The degree to which public safety will be threatened by a RCC Development;
6. The degree to which other site specific attributes or site specific concerns are not appropriately addressed by a RCC Development.

540.4 Procedural Requirements

1. Pre-Application Meeting: A pre-application meeting between the Planning Board and/or Planning Department and the applicant is strongly encouraged.
2. Preliminary (Conventional) Plan/RCC Sketch Plan: Applicants proposing the subdivision of land into six (6) or more lots shall submit a Sketch Plan for an RCC Development along with a Preliminary (Conventional) Subdivision Plan for review by the Planning Board. One of the purposes of this review is to determine the number of lots possible in the RCC Development. For this reason, it is strongly recommended that a copy of the existing conditions plan required in Section 540.4.3 below be submitted at this stage. The Planning Board shall approve, approve with conditions, or disapprove the preliminary plan/RCC Sketch Plan within forty-five (45) days of receipt of a completed application. Upon receipt of the Planning Board's written decision regarding said plan, the applicant may submit a definitive subdivision and RCC Development plan in accordance with the Planning Board's written decision. If the above-noted forty-five (45) day time period has lapsed without a written decision being issued by the Planning Board, the applicant may submit a definitive subdivision and RCC Development plan in accordance with Section 540.4.3 of this Bylaw.
3. Definitive Subdivision and RCC Development Plan: The Definitive RCC Development Subdivision Plan shall show: location and boundaries of the site, proposed land and building uses, lot lines, location of open space, proposed grading, location and width of streets and ways, parking, landscaping, existing vegetation to be retained, water supply or approximate location of wells, drainage, proposed easements and methods of sewage disposal. A team including a Registered Civil Engineer, Registered Land Surveyor, and a Registered Landscape Architect shall prepare the plan. An accompanying Existing Conditions Plan shall depict existing topography, wetlands, waterbodies and the one hundred (100) year floodplain, all existing rights of way,

easements, existing structures, the location of significant features such as woodlands, tree lines, open fields or meadows, scenic views, watershed divides and drainage ways, fences and stone walls, roads, driveways, and cart paths. Submission of photographs depicting existing conditions, views and vistas from various locations on the property and from public and private ways shall accompany the plan submission. The Site Analysis shall also show locations of soil test pits and percolation tests, with supporting documentation on test results. Applicants shall also include a statement indicating the proposed use and ownership of the open space as permitted by this Bylaw. Applicants should refer to the Subdivision Rules and Regulations for provisions regarding preparation and submittal of plans.

4. Density/Number of Dwelling Units: The total number of dwelling units in a Residential Conservation Cluster shall be determined by the following formula:

a) [Total area of land subject to the application] – [Area of wetlands and waterbodies] = Applicable Land Area

[[Applicable Land Area] x [.75]] Divided by Minimum Lot Area Established for the Zoning District = Total number of dwelling units.

The number of dwelling units permitted in a Residential Conservation Cluster shall not exceed that which would be permitted under a conventional subdivision that complies with the Zoning Bylaw and the Subdivision Rules and Regulations of the Planning Board and any other applicable laws and regulations.

5. Review and Decision: Upon receipt of the application and the required plans, the Planning Board shall transmit one copy each to the Board of Health, Historical Commission, and Conservation Commission. Within forty-five (45) days of their receipt of the application/plans, these agencies shall submit any recommendations to the Planning Board. The Planning Board shall act on applications according to the procedure specified in G. L. c. 40A, sec. 9. Notice shall be provided of hearings in accordance with Chapter 40A, sec. 11 and Chapter 41, sec. 81T. Public hearings for the subdivision application and the special permit application shall be conducted concurrently.

6. Criteria for Special Permit Decision:

a) Findings: The Planning Board may approve the development upon finding that it complies with the purposes and standards of the RCC Development Bylaw and is superior in design to a conventional subdivision with regard to protection of natural features and scenic resources of the site. The Planning Board shall consider the following criteria in making its decision:

1. Upland open space as required by this Bylaw has been provided and generally conforms to the Design Requirements in Section 540.8 of this Bylaw.

2. Approximate building sites have been identified and are not located closer than one hundred (100) feet to wetlands and waterbodies.

3. Proposed streets have been aligned to provide vehicular access to each dwelling unit in a reasonable and economical manner. Lots and streets have been located to avoid or minimize adverse impacts on open space areas and to provide lots with views of and access to the open space.
 4. All lots meet the applicable dimensional requirements of Section 540.5 of the RCC Development Bylaw and all other relevant provisions of the Zoning Bylaw.
 5. The provisions of Section 560 of the Zoning Bylaw will be met. The Planning Board's findings, including the basis of such findings, shall be stated in the written decision of approval, conditional approval or denial of the application for special permit.
- b) Conditions: The Planning Board shall impose conditions in its decision as necessary to ensure compliance with the purposes of this Bylaw. Approval of an RCC Development shall be conditioned upon Definitive Subdivision approval and shall be conditioned to provide that no further division of land which increases the number of lots or results in an alteration to the area to be set aside as open space may occur without a modification of the special permit. Any alteration of lot lines or layout of ways shall require approval of the Planning Board and shall be in compliance with the requirements of the RCC Development Bylaw and the Subdivision Rules and Regulations.
- c) Time Limit: A special permit is granted for a period of two (2) years from the date of its approval and shall lapse if substantial use or construction has not commenced by such date, except for good cause shown. In its sole discretion, the Planning Board may grant extensions to allow construction of subdivisions within the vested rights limits set forth in G.L. c. 40A, sec.6 except where such extension would derogate from the intent and purpose of this Bylaw.
- d) Relationship to Subdivision Control Law: Nothing contained herein shall exempt a proposed subdivision from compliance with other applicable provisions of these Bylaws or the Subdivision Rules and Regulations of the Planning Board, nor shall it affect the right of the Board of Health and of the Planning Board to approve, condition or disapprove a subdivision plan in accordance with the provision of such Rules and Regulations and of the Subdivision Control Law.

540.5 Standards and Dimensional Requirements

Where the requirements of this section differ from or conflict with the requirements found elsewhere in this Bylaw, the requirements of this section shall prevail.

1. Minimum Lot Size: The minimum lot size shall be one-half (1/2) the square footage otherwise required by the Zoning District in which the project is located.
2. Minimum Frontage: The minimum frontage may be reduced from frontage otherwise required in the Zoning District, provided however that no lot shall have less than fifty (50) feet of frontage and provided further that such frontage reduction shall apply only to lots fronting on proposed internal roadways.

3. Setbacks: Provided that no objection to the contrary is raised by the Fire Department, the Planning Board may reduce by up to one-half (1/2) the setbacks otherwise required by the Zoning Bylaw if the Board finds that such reduction will result in better design, improved protection of natural and scenic resources, and will otherwise comply with this Bylaw. Notwithstanding this provision or the requirements of the Zoning Bylaw, every dwelling fronting on the proposed roadways shall be set back a minimum of fifteen (15) feet from the roadway right-of-way, and a minimum of fifty (50) feet from the outer perimeter of the land subject to the application. This fifty (50) foot setback shall be maintained in a naturally vegetated state to screen and buffer the development and may be included within the open space. This setback may be eliminated where the proposed development abuts existing permanent open space. Wherever feasible, construction of the dwelling at the front setback line is encouraged.

4. Required Open Space: All land area not utilized for lots, roads, and drainage shall be set aside as open space. A minimum of sixty percent (60%) of the upland area of the parcel ("applicable land area") shall be provided as open space. As an exception, where the open space is proposed to be deeded to the Town or a qualified land trust pursuant to 540.7 of this Bylaw, and in fact, such a transfer occurs, a minimum of fifty percent (50%) of the upland area of the parcel shall be provided as open space. Applicants are encouraged to include wetlands and waterbodies within the open space; however, they do not count toward the open space requirement. Roadway rights-of-way shall not count toward the area to be provided as open space.

540.6 Permissible Uses of Open Space

1. Purposes: Open space shall be used solely for recreation, conservation, or agriculture purposes by residents and/or the public. Where appropriate, multiple use of open space is encouraged. At least half of the required open space may be required by the Planning Board to be left in a natural state. The proposed use of the open space shall be specified in the application. If several uses are proposed, the plans shall specify what uses will occur in what areas. The Planning Board shall have the authority to approve or disapprove particular uses proposed for the open space.

2. Leaching Facilities: Subject to the approval of the Board of Health, as otherwise required by law, the Planning Board may permit a portion of the open space to be used for components of sewage disposal systems serving the subdivision, where the Planning Board finds that such use will not be detrimental to the character, quality, or use of the open space, wetlands or waterbodies, and enhances the site plan. The Planning Board shall require adequate legal safeguards and covenants that such facilities shall be adequately maintained by the lot owners within the development. No portion of the open space containing components of a sewage disposal system(s) shall count toward the open space requirements of Section 540.5.4, nor shall any portion of said open space areas be accepted by the Town or conveyed to a nonprofit organization other than a corporation or trust described in Section 540.7(c).

540.7 Ownership of Open Space

1. Ownership Options: At the developer's option and subject to approval by the Planning Board, all areas to be protected as open space shall be:
 - a) Conveyed to the Town to be placed under the care, custody and control of the Conservation Commission, and be accepted by it for a park or open space use. Land conveyed to the Town shall be open for public use;
 - b) Conveyed to a non-profit organization, the principal purpose of which is the conservation or preservation of open space, with a conservation restriction as specified below. Such organization shall be acceptable to the Town as a bona fide conservation organization; or
 - c) Conveyed to a corporation or trust owned or to be owned by the owners of lots or residential units within the development (i.e. "homeowners' association") and placed under conservation restriction. If such a corporation or trust is utilized, as indicated herein, ownership thereof shall pass with conveyance of the lots or residential units. The developer is responsible for the maintenance of the open space and other facilities to be held in common until such time as the homeowners' association is capable of assuming such responsibility. Thereafter, the members of the association shall share the cost of maintaining the open space. The Planning Board shall require the applicant to provide documentation that the homeowners' association is an automatic (mandatory) association that has been established prior to the conveyance of any lots within the subdivision.
2. Permanent Restriction: In any case when open space is not conveyed to the Town, a permanent conservation or agricultural preservation restriction, in accordance with G. L. c. 184 sec. 31, approved by the Planning Board and Board of Selectman, and enforceable by the Town, conforming to the standards of the Massachusetts Executive Office of Environmental Affairs, Division of Conservation Services, shall be recorded to ensure that such land shall be kept in an open or natural state and not be built for residential use or developed for accessory uses such as parking or roadways except as permitted by this Bylaw and approved by the Planning Board. Restrictions shall provide for periodic inspection of the open space by the Town. Such restriction shall be submitted to the Planning Board prior to approval of the project and recorded at the Registry of Deeds/Land Court simultaneously with recording of the definitive subdivision plan. A management plan may be required by the Planning Board that describes how existing woods, fields, meadows or other natural areas shall be maintained in accordance with good conservation practices.
3. Encumbrances: All areas to be set aside as open space shall be conveyed free of any mortgage interest, security interest, liens or other encumbrances.
4. Maintenance of Open Space: In any case where open space is not conveyed to the Town, the Town shall be granted an easement over such land sufficient to ensure its perpetual maintenance as conservation or recreation land. Such easement shall provide that in the event the trust or other owner fails to maintain the open space in reasonable condition, the Town may, after notice to the lot owners and public hearing, enter upon such land to maintain it in order to prevent or abate a nuisance. The cost of such maintenance by the Town shall be assessed against the properties within the

development and/or to the owner of the open space. The Town may file a lien against the lot or lots to ensure payment of such maintenance expenses.

540.8 Design Process

Each development plan shall follow the design process outlined below. When the development plan is submitted, applicants shall be prepared to demonstrate to the Planning Board that this design process was considered in determining the layout of proposed streets, house lots, and contiguous open space.

1. Understanding the Site. The first step is to inventory existing site features, taking care to identify sensitive and noteworthy natural, scenic and cultural resources on the site, and to determine the connection of these important features to each other.
2. Evaluating Site Context. The second step is to evaluate the site in its larger context by identifying physical (e.g., stream corridors, wetlands), transportation (e.g., road and bicycle networks), and cultural (e.g., recreational opportunities) connections to surrounding land uses and activities.
3. Designating the Contiguous Open Space. The third step is to identify the contiguous open space to be preserved on the site. Such open space should include the most sensitive and noteworthy resources of the site, and, where appropriate, areas that serve to extend neighborhood open space networks.
4. Location of Development Areas. The fourth step is to locate building sites, streets, parking areas, paths and other built features of the development. The design should include a delineation of private yards, public streets and other areas, and shared amenities, so as to reflect an integrated community, with emphasis on consistency with Duxbury's historical development patterns.
5. Lot Lines. The final step is to draw the lot lines.

540.9 Design Requirements

The location of open space provided through this Bylaw shall be consistent with the policies contained in the Duxbury Comprehensive Plan and the Open Space and Recreation Plan, as amended. The following design requirements shall apply to open space and lots provided through this Bylaw:

1. Open space shall be planned as large, contiguous areas whenever possible. Long thin strips or narrow areas of open space (less than one hundred [100] feet wide) shall occur only when necessary for access, as vegetated buffers along wetlands or the perimeter of the site, or as connections between open space areas.
2. Open space shall be arranged to protect valuable natural and cultural environments such as stream valleys, wetland buffers, unfragmented forestland and significant trees, wildlife habitat, open fields, scenic views, trails, and archeological sites and to avoid development in hazardous areas such as floodplains and steep slopes. The development plan shall take advantage of the natural topography of the parcel and cuts and fills shall be minimized.

3. Open space may be in more than one parcel provided that the size, shape and location of such parcels are suitable for the designated uses. Where feasible, these parcels shall be linked by trails.
4. Where the proposed development abuts or includes a body of water or a wetland, these areas and the one hundred (100) foot buffer to such areas shall be incorporated into the open space. Where appropriate, reasonable access shall be provided to shorelines.
5. The maximum number of house lots compatible with good design shall abut the open space and all house lots shall have reasonable physical and visual access to the open space through internal roads, sidewalks or paths. An exception may be made for resource areas vulnerable to trampling or other disturbance.
6. Open space shall be provided with adequate access, by a strip of land at least twenty (20) feet wide, suitable for a footpath, from one (1) or more streets in the development.
7. Development along existing scenic roads and creation of new driveway openings on existing regional roadways shall be minimized.
8. Where a proposed development abuts land held for conservation purposes, the development shall be configured to minimize adverse impacts to abutting conservation land. Trail connections should be provided where appropriate.
9. Residential structures shall be oriented toward the street serving the premises.

540.10 Types of Buildings

The provisions of Section 410.1.1 notwithstanding, an RCC Development may consist of any combination of single-family, two-family and multifamily residential structures. A multifamily structure shall not contain more than three (3) dwelling units. The architecture of all multifamily buildings shall be residential in character, particularly providing gabled roofs, predominantly wood siding, an articulated footprint and varied facades.

540.11 Affordable Component

As a condition of the grant of any special permit for a RCC Development containing six (6) or more lots or dwelling units, the Planning Board shall ensure compliance with the provisions of Section 560 ("Inclusionary Housing") of the Zoning Bylaw.

540.12 Special Permit Requirements

In reviewing an application under this Bylaw, the Planning Board shall rely, to the extent warranted, on the provisions of Section 906.2 of the Zoning Bylaw.

560 INCLUSIONARY HOUSING

560.1 Purpose and Intent

The purpose of this Bylaw is to outline and implement a coherent set of policies and objectives for the development of affordable housing in compliance with the Duxbury Comprehensive Plan, G.L. c. 40B sec. 20-23 and ongoing programs within the Town to promote a reasonable percentage of housing that is affordable to moderate income buyers. It is intended that the affordable housing units that result from this Bylaw be considered as Local Initiative Program (LIP) dwelling units in compliance with the requirements for the same as specified by the Department of Community Affairs, Division of Housing and Community Development and that said units count toward the Town's requirements under G. L. c. 40B sec. 20-23.

560.2 Definitions

1. Affordable Housing Unit. A dwelling unit that qualifies as a local initiative unit under the Commonwealth's Local Initiative Program and meets the requirements of a subsidized housing unit for purposes of listing in the subsidized housing inventory under G. L. c. 40B Sec. 20-23.
2. Qualified affordable housing unit purchaser. An individual or family with household incomes that do not exceed 80% of the median income, with adjustments for household size, as reported by the most recent information from the United States Department of Housing and Urban Development (HUD) and/or the Massachusetts Department of Housing and Community Development (DHCD).

560.3 Applicability

1. Division of Land. This Bylaw shall apply to the division of land into six (6) or more lots, and shall require a special permit from the Planning Board under Section 530 or Section 540 of the Zoning Bylaw. A special permit shall be required for land divisions under G. L. c. 40A sec. 9 as well as for "conventional" or "grid" divisions allowed by G. L. c. 41 sec. 81-L and sec. 81-U, including those divisions of land that do not require subdivision approval.
2. Multiple Units. This Bylaw shall apply to the construction of six (6) or more dwelling units in accordance with Section 700 of the Zoning Bylaw, whether on one or more contiguous parcels, and shall require a special permit from the Board of Appeals.

560.4 Mandatory Provision of Affordable Units

The Planning Board or Board of Appeals shall, as a condition of approval of any development referred to in Sections 560.3.1 and 560.3.2, require that the applicant for special permit approval comply with the obligation to provide affordable housing pursuant to this Bylaw and more fully described in Section 560.5.

560.5 Provision of Affordable Units

The Planning Board or Board of Appeals shall deny any application for a special permit for development under Sections 530, 540, and 700, and this section if the applicant for special permit approval does not agree that:

1. At least ten percent (10%) of the lots in a division of land or units in a multiple unit development subject to this Bylaw shall be established as affordable housing units in any one or combination of methods provided for below. Fractions of a lot or dwelling unit shall be rounded up to the nearest whole number, such that a development proposing six (6) dwelling units shall require one affordable unit, a development proposing eleven (11) dwelling units shall require two affordable units and so on.
 - a) Constructed or rehabilitated on the locus subject to the special permit;
 - b) Constructed or rehabilitated on a locus different than the one subject to the special permit (see Section 560.8);
 - c) An applicant may offer, and the Planning Board or Board of Appeals, in concert with the Board of Selectmen, may accept donations of land in fee simple, on or off-site, that the Planning Board or Board of Appeals determines are suitable for the construction of affordable housing units. The value of donated land shall be equal to or greater than the value of the construction or set-aside of the affordable units. The Planning Board or Board of Appeals may require, prior to accepting land as satisfaction of the requirements of this Bylaw, that the applicant submit appraisals of the land in question, as well as other data relevant to the determination of equivalent value;
 - d) For non-rental affordable housing units, a cash payment to the Town of Duxbury Affordable Housing Trust may be made subject to Section 560.11 of this Bylaw.

The applicant may offer, and the Planning Board or Board of Appeals may accept, any combination of the Section 560.5.1(a)-(d) requirements provided that in no event shall the total number of units or land area provided be less than the equivalent number or value of affordable units required by this Bylaw.

560.6 Provisions Applicable to Affordable Housing Units On- and Off-Site

1. Siting of affordable units – All affordable units constructed or rehabilitated under this Bylaw shall be situated within the development so as not to be in less desirable locations than market-rate units in the development and shall, on average, be no less accessible to public amenities, such as open space, as the market-rate units.
2. Minimum design and construction standards for affordable units – Affordable housing units within market rate developments shall be integrated with the rest of the development and shall be compatible in design, appearance, construction and quality of materials with other units.
3. Timing of construction or provision of affordable units or lots – Where feasible, affordable housing units shall be provided coincident to the development of market-rate

units, but in no event shall the development of affordable units be delayed beyond the schedule noted below:

MARKET-RATE UNIT %	AFFORDABLE HOUSING UNIT%
Up to 30%	None required
30% plus 1 unit	At least 10%
Up to 50%	At least 30%
Up to 75%	At least 50%
75% plus 1 unit	At least 70%
Up to 90%	100%

Fractions of units shall not be counted.

560.7 Marketing Plan for Affordable Units

Applicants under this Bylaw shall submit a marketing plan or other method approved by the Planning Board or Board of Appeals, to the Planning Board or Board of Appeals for approval, which describes how the affordable units will be marketed to potential homebuyers. This plan shall include a description of the lottery or other process to be used for selecting buyers. The marketing plan must describe how the applicant will accommodate local preference requirements, if any, established by the Board of Selectmen, in a manner that complies with the nondiscrimination in tenant or buyer selection guidelines of the Local Initiative Program.

560.8 Provision of Affordable Housing Units Off-Site

As an alternative to the requirements of Section 560.5.1(a), an applicant subject to the Bylaw may develop, construct or otherwise provide affordable units equivalent to those required by Section 560.5 off-site. All requirements of this Bylaw that apply to on-site provision of affordable units, shall apply to provision of off-site affordable units. In addition, the location of the off-site units to be provided shall be approved by the Planning Board or Board of Appeals as an integral element of the special permit review and approval process.

560.9 Maximum Incomes and Selling Prices: Initial Sale

1. The developer of the housing units or his/her agent shall verify prior to transferring title or executing a lease that each prospective purchaser or renter of an affordable housing unit created under this Bylaw is a household of low or moderate income, as defined by the Commonwealth's Local Initiative Program (LIP). Toward this end:

- a) The developer shall engage a qualified certifying agent acceptable to the Planning Board, or to the Board of Appeals for a special permit application pursuant to Section 700 of the Zoning Bylaw, to receive purchase or rental applications, obtain and review documentation concerning sources and amounts

of household income, and certify to the Town that all purchasers or renters approved for an affordable unit meet LIP income eligibility requirements.

b) The developer is responsible for making arrangements acceptable to the Planning Board, or to the Board of Appeals for a special permit application pursuant to Section 700 of the Zoning Bylaw, to provide annual certifications to the Town as may be required to place and maintain the affordable units on the Commonwealth's Chapter 40B Subsidized Housing Inventory.

2. The maximum allowable purchase price or maximum allowable rent for affordable units created under this Bylaw shall comply with the regulations and guidelines of the Local Initiative Program (LIP).

560.10 Preservation of Affordability; Restrictions on Resale

Each affordable unit created in accordance with this Bylaw shall have the following limitations governing its resale. The purpose of these limitations is to preserve the long-term affordability of the unit and to ensure its continued availability to qualified purchasers in the future. The resale controls shall be established through a deed rider or an affordable housing restriction as defined by G.L. c.184, Section 31, recorded at the Plymouth County Registry of Deeds or the Land Court, and shall be in force for as long a period as is lawful. The affordable housing use restriction shall meet the requirements of the Local Initiative Program.

1. Resale price – Sales beyond the initial sale to a qualified affordable income purchaser shall include the initial discount rate between the sale price and the unit's appraised value at the time of resale. This percentage shall be recorded as part of the restriction on the property noted in Section 560.10. For example, if a unit appraised for \$300,000 is sold for \$225,000 as a result of this Bylaw, it has sold for seventy-five percent (75%) of its appraised value. If, several years later, the appraised value of the unit at the time of proposed resale is \$325,000, the unit may be sold for no more than \$243,750, or seventy-five percent (75%) of the appraised value of \$325,000.

2. Right of first refusal to purchase – The purchaser of an affordable housing unit developed as a result of this Bylaw shall agree to execute a deed rider prepared by the Town, granting, among other things, the Town's right of first refusal for a period not less than the maximum period allowable under guidelines set by the Department of Housing and Community Development for Local Initiative Units as defined by the Local Initiative Program, to purchase the property or assignment thereof, in the event that, despite diligent efforts to sell the property, a subsequent qualified purchaser cannot be located.

3. The Planning Board or Board of Appeals shall require, as a condition for special permit approval under this Bylaw, that the deeds to the affordable housing units contain a restriction against renting or leasing said unit during the period for which the housing unit contains a restriction on affordability.

4. The Planning Board or Board of Appeals shall require, as a condition for special permit approval under this Bylaw, that the applicant comply with the mandatory set-asides and accompanying restrictions on affordability, including the execution of the deed rider noted in Section 560.10. The Zoning Enforcement Officer shall not issue an occupancy permit for any affordable unit until the deed restriction is recorded at the Plymouth County Registry of Deeds or the Land Court.

560.11 Fees in Lieu of Affordable Housing Units

As an alternative to Section 560.5 (a) through (c), an applicant may contribute a cash payment to the Town of Duxbury Affordable Housing Trust, to be used for the development of affordable housing by the Town or its designees, in lieu of constructing and offering affordable units within the locus of the proposed development or off-site.

1. Calculation of fees-in-lieu of units. The applicant for development subject to this Bylaw may pay a fee in lieu of the construction of affordable units. For each affordable unit not constructed or provided through one or a combination of the methods specified in 560.5 (a) through (c), the fee shall be an amount equal to the difference between the median sale price for new single-family homes built in Duxbury during the preceding three fiscal years, as determined and reported by the Board of Assessors, and the purchase price of a home that is affordable to a qualified purchaser.

a) For developments of multi-family condominiums, the Planning Board may substitute the median sale price for new condominiums built in Duxbury during the preceding three (3) fiscal years for the median sale price of new single-family homes.

b) The methodology used to determine an affordable purchase price shall comply with Local Initiative Program guidelines in effect at the time of application for a special permit.

c) The assumptions used to determine an affordable purchase price, including but not limited to minimum down payment, mortgage interest rate, term, closing and other costs shall be consistent with first-time homebuyer mortgage products available from commercial lending institutions located in or serving Duxbury at the time of application for a special permit, all in accordance with the Inclusionary Housing Submission Requirements and Procedures Manual adopted by the Planning Board and filed with the Town Clerk.

d) Upon adoption of this bylaw by town meeting, the Planning Board shall prepare and adopt an Inclusionary Housing Submission Requirements and Procedures Manual after holding a public hearing on the same.

2. Schedule of fees in lieu of construction. Fees in lieu of construction shall be paid to the Town of Duxbury Affordable Housing Trust by the applicant at the time of application for building permits, according to the applicant's choice of one of the two following payment schedules:

- a) A lump sum total payment submitted with the initial building permit application in the amount as calculated in accordance with Section 560.11 and established with the Planning Department;
- or
- b) A prorated payment calculated in accordance with Section 560.11 and divided as equal per unit fees established by the Planning Department, initiated with the first building permit application and paid in full with the filing of the building permit application representing the project's eighty percent (80%) completion.

570 AFFORDABLE HOUSING

570.1 Purpose

To facilitate affordable housing development on qualified pre-existing non-conforming lots as defined in this Bylaw. The intent of this section is to provide a mechanism for the construction of affordable housing units to satisfy the needs of the present and future inhabitants of Duxbury of low and moderate income. The Planning Board is designated as the Special Permit Granting Authority (SPGA) for purposes of this Bylaw and may grant a special permit for the specific and sole purpose of constructing an Affordable Housing dwelling pursuant to this section of this Bylaw.

570.2 Definitions

1. Affordable Housing Unit: See Section 560.2.1
2. Low and Moderate Income Household: A household income not exceeding eighty percent (80%) of the median household income, adjusted for household size, in the metropolitan or non-metropolitan statistical area that includes the Town of Duxbury, as determined annually by the U.S. Department of Housing and Urban Development (HUD).
3. Median Household Income: The median household income for the metropolitan or non-metropolitan statistical area that includes the Town of Duxbury, as determined annually by the U.S. Department of Housing and Urban Development (HUD).
4. Qualified Affordable Housing Unit Purchaser: See Section 560.2.2.
5. Use Restriction: A deed restriction or other legal instrument recorded in the Plymouth County Registry of Deeds or land court registry district which effectively restricts the occupancy of an affordable housing unit to households of low and moderate income during the term of affordability. Selection of eligible tenant/owners shall be made in a fair and reasonable manner in compliance with any and all applicable fair housing and antidiscrimination laws.
6. Upland Area: All lands not defined herein as wetlands.
7. Floor Area Ratio (FAR): Gross floor area of all buildings on the lot measured in square feet, divided by the total square footage of the entire lot.
8. Vacant Lot: A lot absent of any man-made structure above the surface.

9. Appraised Value: An opinion of value developed by a Massachusetts licensed real estate appraiser that conforms to the Uniform Standards of Professional Appraisal Practice (USPAP).
10. Effective Date: March 8, 2008.

570.3 Special Permit Criteria for Eligible Lots

The Planning Board, as the Special Permit Granting Authority (SPGA) under this section of the Bylaw, may grant a special permit to allow construction of an Affordable Single Family Housing Unit on an eligible parcel of land in the Residential Compatibility (RC) and Planned Development (PD) Zoning Districts that meets the following criteria:

1. Pre-Existing Lot: Eligible parcels must have existed as a separate lot of record prior to the effective date of this Bylaw (the "Effective Date"). No landowner shall be eligible for more than one (1) affordable housing unit lot from a single parcel of land, or from adjoining parcels of land in common ownership, based on the ownership status of the land as determined by instruments and plans on file at the Plymouth County Registry of Deeds as of the Effective Date. No affordable housing unit lot shall be further divided. The Planning Board shall note such limitations, with a description of the land affected by such limitations, in its written decision.
2. Existing Ownership and Use: Eligible lots must be in private ownership and vacant prior to and following the Effective Date. Eligible lots may also be owned by the Duxbury Affordable Housing Trust and/or any other non-profit housing entity.
3. Dimensional Characteristics: Eligible lots must meet the dimensional characteristics prior to the Effective Date:
 - a) Lot Area: Minimum ten thousand (10,000) square feet of upland area.
 - b) Continuous Frontage: Twenty-five (25) feet on a public road.
 - c) Lot Shape: See Section 570.3.13 below.
4. Setbacks: All structures must be set back thirty (30) feet from all front, side and rear property lines.
5. Access: The applicant shall provide for safe access for public safety vehicles and personnel to the dwelling unit to be constructed on the lot, and the intersection of such access driveway to the public way shall be placed across the frontage in the best location available to the applicant.
6. Dwelling Unit Size and Coverage: The size of a dwelling unit and number of bedrooms in the Aquifer Protection Overlay District (APOD) zone shall meet the requirements of Section 406 herein.
7. Floor Area Ratio: The maximum floor area ratio (FAR) of the dwelling shall not exceed 0.15 up to a maximum of two thousand five hundred (2,500) square feet per dwelling unit. Future additions or alterations that would exceed the two thousand five hundred (2,500) square feet maximum floor area ratio are prohibited once a special permit has been issued.
8. Minimum and Maximum and Dwelling Unit Size: Each Affordable Housing Unit shall contain a minimum area of seven hundred (700) square feet with one (1) bedroom; a minimum area of eight hundred fifty (850) square feet with two (2) bedrooms; a minimum area of one thousand two hundred (1,200) square feet with

three (3) bedrooms; or a minimum area of one thousand four hundred (1,400) square feet with four (4) bedrooms or more. The maximum dwelling unit size shall not exceed the FAR.

9. Utilities: All utilities shall be installed underground.

10. Purchase or Rent: The Affordable Housing Unit permitted by this section shall be restricted for purchase or rent by only low and moderate households, in accordance with the standards set forth in this section.

11. Parking: All private parking areas shall be contained entirely on the property.

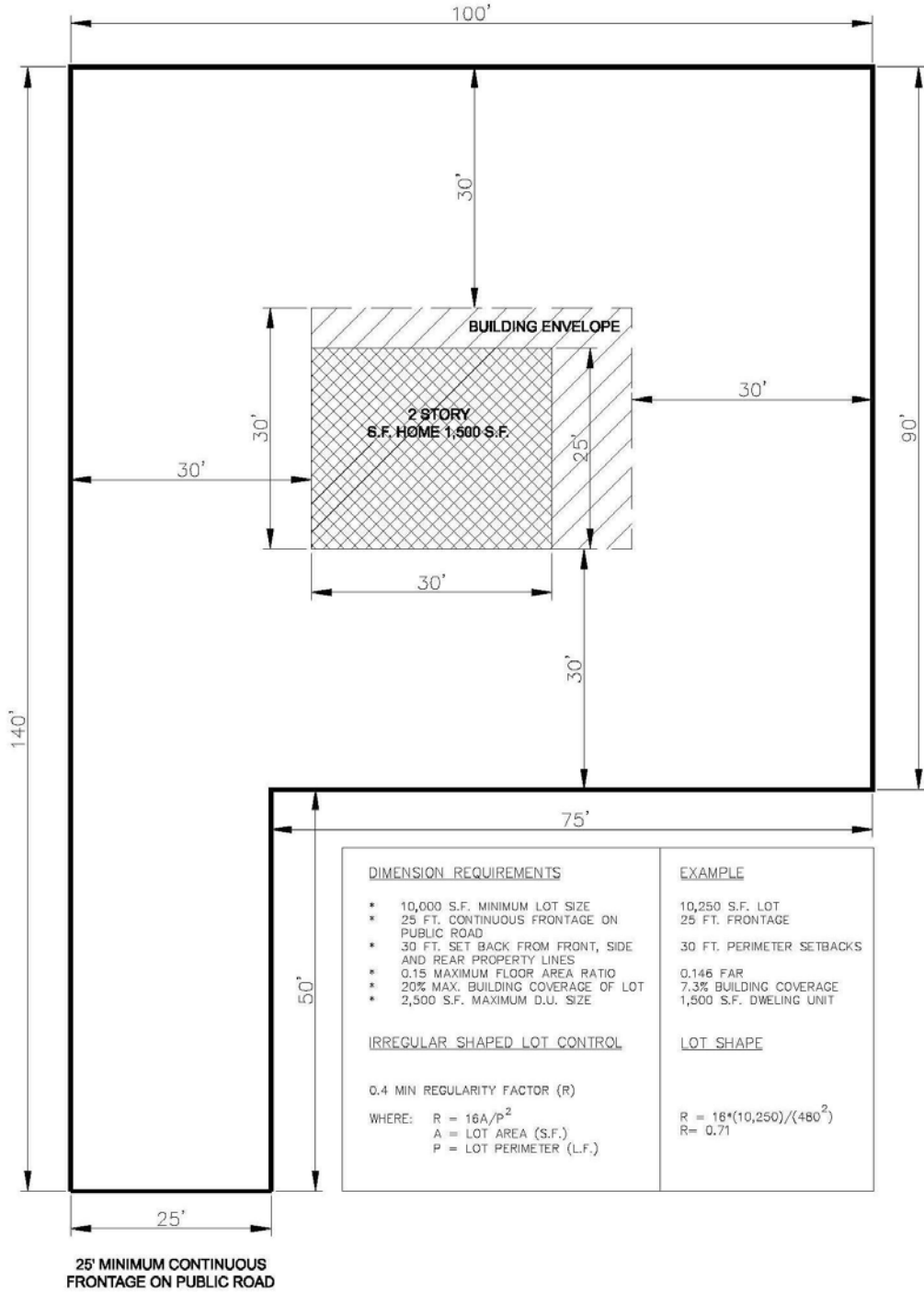
12. Plans: The applicant shall submit, along with the special permit application, a surveyed site plan depicting the proposed affordable housing unit and lot layout. The plan shall be prepared by a registered land surveyor, and shall be in such form as will be required for recording with the Registry of Deeds or filing with the Land Court.

13. Control of Substantially Irregular Lot Shape: No lot shall be created which is substantially irregular in shape. For the purposes of this section, a lot is "substantially irregular" if it has a regularity factor which is less than 0.4 as determined by the following formula: $r = 16A/P^2$ where r = regularity factor; A = area of the lot (in square feet); and P = perimeter of the lot (in feet). Lots less than 0.4 by the applied formula shall be considered ineligible for the purposes of this Bylaw. (See Figure 1 below).

14. Other Requirements: All other requirements of Article 500 and the remainder of this Bylaw shall remain applicable and in full force and effect.

FIGURE 1

EXAMPLE OF ELIGIBLE LOT FOR AFFORDABLE HOUSING UNIT



570.4 Use Restrictions

Any affordable housing unit created under this section shall be subject to a use restriction/regulatory agreement on the lot conforming to the following criteria:

1. The restriction shall be assured in perpetuity or for the longest period of time allowed by applicable law.
2. The restriction shall be recorded as a condition of deed or mortgage.
3. The restriction shall have a legal mechanism for compliance that occurs without Town intervention in any form or manner.
4. The restriction shall include a process for verification of compliance.
5. The restriction shall ensure that the affordable housing unit may only be sold to Qualified Affordable Housing Unit Purchasers at an affordable price, or leased to Qualified Affordable Housing Unit Renters at affordable rents, subject to Section 570.6.3 herein.
6. The restriction shall provide that the affordable housing unit must be sold or rented on a fair and open basis.

For purposes of this bylaw, the Town of Duxbury either through the Duxbury Housing Authority or any designee established by the Town, agrees to perform the duties of Monitoring Agent and to adhere to the responsibilities as defined in the Monitoring and Marketing Agreement entered between the Town and the applicant.

570.5 Maximum Incomes and Selling Prices: Initial Sale

1. Proof of Income Eligibility: To ensure that only eligible households may purchase affordable housing units pursuant to this Bylaw, the purchaser of an affordable housing unit shall be required to submit copies of the last three (3) years' federal and state income tax returns and certify, in writing and prior to transfer of title, to the developer of the housing units or his/her/their agent, and within thirty (30) days following transfer of title, to the local housing trust, community development corporation, housing authority or other agency as established by the Town, that his/her or their family's annual income level does not exceed the maximum level as established by the Commonwealth's Department of Housing and Community Development, and as may be revised from time to time.
2. Maximum Housing Cost: The maximum housing cost for affordable units created under this Bylaw is as established by the Commonwealth's Department of Housing and Community Development, Local Initiative Program, as may be revised from time to time, or as revised from time to time by the Town.

570.6 Preservation of Affordability; Restrictions on Resale

1. Preservation of Affordability: Each affordable unit created in accordance with this Bylaw shall have limitations governing its resale. The purpose of these limitations is to preserve the long-term affordability of the unit and to ensure its continued availability for affordable income households. The resale controls shall be established through a

use restriction on the property pursuant to Section 570.4 above and shall be in full force and effect in perpetuity or the longest period of time allowed by applicable law.

2. Resale Price: Sales beyond the initial sale to a qualified affordable income purchaser shall include the initial discount sale price not to exceed ninety percent (90%) of the property's appraised value (as defined under Section 570.1 above) at the time of sale. This percentage shall be recorded as part of the restriction on the property pursuant to Section 570.4 above.

3. Right of First Refusal to Purchase: The purchaser of an affordable housing unit developed as a result of this Bylaw shall agree to execute a deed rider approved by the Town, consistent with model riders prepared by Department of Housing and Community Development, granting, among other things, the Town of Duxbury or the Duxbury Affordable Housing Trust the right of first refusal to purchase the property in the event that a subsequent qualified purchaser cannot be located.

4. Deed Restrictions: The Planning Board shall require, as a condition for a special permit under this Bylaw, that the applicant comply with the mandatory set-asides and accompanying restrictions on affordability, including the execution of a regulatory agreement pursuant to Section 570.4 above. The Building Commissioner/Inspector shall not issue a building permit for any affordable unit until the regulatory agreement is recorded.

570.7 Conflict with Other Bylaws

The provisions of this Bylaw shall be considered supplemental of existing zoning bylaws. To the extent that a conflict exists between this Bylaw and others, the more restrictive bylaw, or provisions therein, shall apply.

570.8 Review by Special Permit Granting Authority

Prior to granting a special permit for an affordable housing unit under this section, the Planning Board must make the following findings:

1. The proposed affordable housing unit will be in harmony with the general purpose and intent of the Bylaws;
2. The increase in density resulting from the grant of a special permit will not adversely affect the surrounding neighborhood;
3. The placement of a new single family housing unit on the non-conforming lot can be accomplished without jeopardizing public health or safety, and without detriment to the environment: and
4. In determining whether or not to grant a special permit for development of an affordable housing unit lot, and in determining what conditions, if any, to impose on such a special permit, the Planning Board may consider, among other things, circumstances related to soil conditions, topography, lot history, wetlands, proposed building locations, and public safety and convenience.

570.9 Severability

If any provision of this Bylaw is held invalid by a court of competent jurisdiction, the remainder of this Bylaw shall remain in full force and effect.

ARTICLE 600 - SPECIAL REGULATIONS

601 SIGN REGULATIONS

The provisions of Section 601 shall apply to all zoning districts.

The purpose of the following regulations to all types of signs is to reasonably regulate the size, location, illumination and types of materials in order to:

1. Encourage signs that have locations, materials and designs that are compatible with the surrounding neighborhood and buildings;
2. Eliminate excessive and confusing signs; and
3. Eliminate potential hazards to motorists and pedestrians.

601.1 Definitions

Sign

Any word, letter, symbol, drawing, picture, design, device, article or object which advertises, calls attention to or indicates the location of any premises, person or activity; whatever its manner of composition or construction and however displayed.

Accessory Sign

A sign, which advertises or indicates the person occupying the premises on which it is erected or the business transacted thereon or advertises the property itself for sale or rent and which contains no other matter.

Freestanding Sign

Any sign not attached to a building.

Hanging Sign

Any sign which projects more than eight (8) inches from a wall or façade.

Primary Sign

A sign which contains information on the name of the business, the owner, and/or goods or services offered, located on the same side of the premises as the main entrance.

Sign, Area of

1. The area of a sign shall be considered to include all lettering, wording, and accompanying designs and symbols, together with the background on which they are displayed, any frame around the sign and any "cutouts" or extensions, but shall not include any supporting structure or bracing.
2. The area of a sign consisting of individual letters or symbols attached to or painted on a surface, building, wall or window, shall be considered to be that of the smallest quadrangle or a triangle which encompasses all of the letters and symbols.
3. The area of a sign consisting of a three-dimensional object shall be considered to be the area of the largest vertical cross-section of that object.

4. In computing the area of double faced signs, the area of one side shall be used.

Sign, Temporary

Any sign maintained for a continuous period of not more than thirty days in a calendar year.

601.2 Procedure

A written application for the installation of all types of signs shall be submitted at the office of the Zoning Enforcement Officer, including signs requiring Special Permits. The application shall include all information necessary to determine compliance with the regulations of this Bylaw.

601.3 General Requirements

1. In all districts, all exterior signs or advertising devices erected or maintained must, unless expressly provided, conform to the following requirements.
2. The information contained on all signs for business shall be limited to the type of business, goods or service offered and name of business and/or owner.
3. Whenever possible, a flush mounted sign attached to the wall of the building shall be used. The method of attaching the sign must be approved by the Zoning Enforcement Officer.
4. If, in the opinion of the Board of Appeals a flush mounted sign would not be adequately visible from a public way, a Special Permit may be sought from the Board of Appeals for the erection of one freestanding sign of not more than two faces. The Special Permit may be conditional upon restrictions that regulate design, illumination, size, colors and construction.
5. Private signs shall not be placed on publicly owned property unless authorized by the Board of Selectmen.
6. Signs not exceeding one square foot containing cautionary or directional information for traffic flow require the approval of the Zoning Enforcement Officer. Informational, directional and traffic signs owned and installed by a government agency are permitted by right.
7. Sign materials should be durable and easy to maintain. Materials such as wood, brass or bronze are most appropriate.
8. In the case of a sign for business use, a primary sign containing information on the name of the business, owner, and goods or services offered shall be limited to one that is located on the same side of the building as the main entrance. In addition, one accessory sign may be erected on any other side of the building in view of a parking area or public way.

601.4 Signs Requiring Special Permit Approval

All freestanding signs and projecting/hanging signs, which are attached by a bracket to a wall and project more than eight inches, require a Special Permit issued by the Board of Appeals.

1. Sign applications for a Special Permit approval must include the following information: Three (3) copies of a scale drawing showing the dimensions of the proposed sign, construction details, any designs or logo, lettering, colors, materials and a cross section of the sign with dimensions. The proposed location of the sign must be identified on a photograph or scale architectural drawing of the building that shows the height above grade and any other necessary dimensions or design features requested by the Board of Appeals. The Design Review Board shall review the application and submit its comments to the Board of Appeals.
2. Proposed signs should, by their location and design, be harmonious with the buildings and sites that they occupy. When acting upon a Special Permit application for a sign, the Board of Appeals shall consider the proposed sign in relation to the character of the building and surrounding neighborhood. Signs should be informative, legible and designed to improve the quality of the streetscape.

601.5 Signs Approved by the Zoning Enforcement Officer

Flush mounted, awning, special events and temporary signs require approval of the Zoning Enforcement Officer.

1. Applications for sign permits must include two copies of the following information. The proposed size, colors, dimensions, materials and location of the sign in sufficient detail for the Zoning Enforcement Officer to evaluate the application. The method of attaching the sign to a structure or erecting the sign must be described.
2. The Zoning Enforcement Officer shall evaluate the proposed sign's location, size, materials, and design to determine if the sign is in compliance with the dimensional regulations set forth in Section 601.6 prior to issuance of a sign permit.

601.6 Dimensional Requirements

General: Lettering shall not exceed fourteen (14) inches in vertical dimension.

1. Awning Signs: Advertising on awnings must be painted on or attached flat against the surface of the awning and not project beyond the valance nor be attached to the underside.
2. Cautionary Signs: Not to exceed three (3) square feet in area.
3. Directional Signs: Not to exceed three (3) square feet in area.
4. For Sale, Rent or Lease Signs:
 - a) Advertising a lot, building or portion thereof: not to exceed six (6) square feet in area;
 - b) Advertising lots or buildings in approved subdivisions: not to exceed twenty (20) square feet in area or be larger than ten (10) linear feet any side.
5. Flush Mounted Signs: Not to exceed one (1) square foot for each linear foot of the façade or wall on the side of the premises containing the main

entrance minus the area of any accessory signs, to a maximum of fifty (50) square feet.

6. Freestanding Signs: Not to exceed twenty-five (25) square feet in area with a maximum height of twelve (12) feet and a minimum height above the ground of thirty (30) inches.
7. Hanging Signs: Not to exceed five (5) square feet in area with the lowest part of the sign a minimum of ten (10) feet above ground and not extending above the top of the wall or façade.
8. Temporary Signs:
 - a) Political signs: May be erected.
 - b) Special Event Signs: Not to exceed six (6) square feet in area, may be erected no sooner than fourteen (14) days before the event, and must be removed no later than twenty-four (24) hours after the event.
9. Window Signs: Signs mounted on windows in addition to the requirements for flush mounted signs, shall not cover more than thirty percent (30%) of the window area.

601.7 Prohibited Signs

1. No sign shall extend above the roof line of the building to which it is fastened.
2. Electric or any other powered signs shall not blink, flash or have moving parts. Neon signs are prohibited. Signs containing reflective elements which sparkle in the sunshine are not permitted.
3. Billboards are not permitted.
4. Any sign advertising a business or organization no longer located on the premises is not permitted.
5. Any signs that obstruct the corner clearance, clear site triangle of any intersection as defined in Section 603.10.3 of this Bylaw are not permitted.
6. String lights used in connection with commercial enterprises, except for temporary lighting used for decoration during the specific holiday season.

601.8 Exempted Signs

1. Signs not exceeding one square foot in area and bearing only property numbers, names of occupants or other identification of premises not having commercial connotations.
2. Flags and insignia of any government except when displayed in connection with commercial promotion.
3. Legal notices, identification, informational or directional signs erected or required by governmental bodies.
4. Carved or other integral devices identifying the building name or date of erection.
5. Signs directing and guiding traffic and parking on private property, but bearing no advertising matter.

6. Standard gasoline pumps, vending machines, or similar devices bearing thereon in usual size and form the product name and type, provided that copy area not exceed four (4) square feet.

7. Temporary signs erected for any charitable or religious cause or allowed by the Board of Selectmen.

8. Signs not exceeding three (3) square feet, necessary to warn of a hazard or to post land, shall be permitted as required to accomplish these purposes.

9. Signs that advertise the sale, lease or rent of a lot or building shall be located only on the property which is being advertised. Signs shall not exceed six (6) square feet in area or two in number. One sign advertising the sale of lots or buildings in approved subdivisions is permitted at the intersection of the new and existing streets. Said sign shall not exceed twenty (20) square feet or be greater than ten (10) feet in any dimension. Any such signs shall be removed within five days of the lease or sale of the premises or the sale of the last lot in the subdivision.

601.9 Illumination

Signs may be illuminated by a constantly steady white light that is shielded and directed at the sign in order to prevent direct glare on a public way or adjacent property. Signs using interior lighting shall have non-exposed white lights of reasonable intensity. Signs shall only be lighted during the hours of operation and shall require a Special Permit.

601.10 Nonconforming Signs

Nonconforming signs shall not be altered by changing the design, construction, wording, painting or lighting without written approval of the Zoning Enforcement Officer.

601.11 Enforcement

1. Maintenance and Removal:

Every sign shall be maintained in good structural condition at all times. All signs shall be kept neatly painted, including all metal parts and supports thereof that are not galvanized or of rust resistant material. The Zoning Enforcement Officer shall inspect and shall have the authority to order the painting, repair, alteration or removal of a sign which shall constitute a hazard to safety, health, or public welfare by reason of inadequate maintenance, dilapidation, or obsolescence.

2. Abandoned Signs:

Except as otherwise provided in the section, any sign that is located on property which becomes vacant and is unoccupied for a period of three months or more, or any sign which pertains to a time, event or purpose which no longer applies, shall be deemed to have been abandoned. Permanent signs applicable to a business temporarily suspended because of a change of ownership or management of such business shall not be deemed abandoned, unless the property remains vacant for a period of six months or more. An abandoned sign

is prohibited and shall be removed by the owner of the sign or owner of the premises.

3. Dangerous or Defective Signs:

No person shall maintain or permit to be maintained on any premises owned or controlled by him any sign which is in a dangerous or defective condition. Any such sign shall be removed or repaired by the owner of the sign or the owner of the premises.

4. Removal of Signs by the Zoning Enforcement Officer:

The Zoning Enforcement Officer shall cause to be removed any sign that endangers the public safety, such as an abandoned, dangerous, or materially, electrically, or structurally defective sign, or a sign for which no permit has been issued.

603 PARKING REGULATIONS

603.1 General Requirements

Off-street parking shall be provided in all zoning districts for new construction, conversion, expansion or increase in intensity of use for any structure. In the case of an expansion or conversion these standards shall apply to the expanded or converted areas.

603.2 Use of Setback Areas for Parking

In Neighborhood Business Districts, a strip not less than ten feet wide on which to grow grass, bushes, flowers or trees shall be maintained open, unpaved and not parked upon along each side and rear property line of such a lot wherever it abuts a residential district.

603.3 Purpose

The purposes of the parking standards are to:

1. Provide adequate parking for business and residences in all zoning districts.
2. Promote traffic safety for both vehicular and pedestrian traffic.
3. Ensure orderly access and egress to and from the public way.
4. Protect abutting residential properties from such nuisances as noise, fumes, headlight glare, dust and increased surface water runoff from the land covered by impervious surfaces.
5. Provide visual relief from broad expanses of pavements and vehicles.
6. Reduce congestion on public ways.

603.4 Number of Parking Spaces, Loading Areas

The following table sets forth the required number of parking spaces and loading areas for uses in all zoning districts. The Board of Appeals may, by Special Permit allow fewer spaces than are required below if they make a finding that the proposed use or site

conditions do not warrant the number of spaces specified in this section. The Zoning Enforcement Officer shall determine the number of parking spaces required for any use or structure not specifically provided for in this section.

PARKING REQUIREMENTS FOR PERMITTED USE

TYPE OF USES	REQUIRED NUMBER OF SPACES
In All Districts:	
Dwelling/apartment over business structure	2 spaces
Automobile retail and service establishment and other retail and service establishments involving usually extensive display areas, either indoor or outdoor in relation to customer traffic.	2 spaces per 800 square feet of gross floor space. In case of outdoor display areas, one space for each 1,000 square feet of lot area.
Commercial, retail, and personal service establishments. Professional and business offices, including banks, insurance, and real estate establishments.	1 space per 300 square feet of gross floor area.
Medical / dental office / clinics / kennels / veterinary establishments	5 spaces per professional office / establishment. Parking areas adequate to accommodate, under normal conditions, the vehicles of occupants, employees, members, customers, clients, and visitors to the premises, shall be provided as determined by the Board of Appeals.
Gas / service stations	3 spaces for each service bay.
Funeral parlors	10 spaces per reposing room.
Restaurants, taverns	1 space for every 4 seats. One additional space for every 2 employees on the largest shift.
All other business uses, including, but not limited to, farm stands, tradesman’s shops, storage, or distribution plants.	Parking spaces adequate to accommodate, under normal conditions, the vehicles of occupants, employees, members, customers, clients, and visitors to the premises shall be provided as determined by the Board of Appeals.

603.5 Design Standards

All parking spaces shall have dimensions of nine feet in width and eighteen and one half feet in length. Curbing or wheel stops shall be used where needed for safety or to delineate spaces in gravel lots. A maximum of two feet of landscaped setback area adjacent to the front or back of the stall for bumper overhang, may be used to satisfy the stall length requirements.

All driveways and maneuvering aisles shall be designed so that traffic flows freely at all times and can exit and enter into a public way being driven in a forward direction. All travel aisles must be a minimum of twenty-four feet wide.

Parking and loading areas shall not be located wholly or partially within the right-of-way of a public street.

603.6 Drainage / Surfacing

1. Parking and loading areas shall be designed and constructed to contain all stormwater runoff on the premises. The drainage system shall be designed and constructed to include the following:
 - a) Oil and grease traps;
 - b) Accommodate the fifteen-year storm event if connected to an existing Town system; connections are subject to Town Engineer's approval; and
 - c) All structures within parking and loading areas shall be designed for H-20 loading capacity.
 - d) Best Management Practices in accordance with industry standards and Massachusetts Department of Environmental Management Guidelines for Stormwater Management, as revised.
2. The following information shall be submitted for review of the drainage design:
 - a) Location and types of inlets;
 - b) Drainage watershed limits, flow paths and acreage of areas tributary to drainage structures and water detention areas;
 - c) The location, type, size, length, invert elevations and slope of all drainage pipes and culverts;
 - d) Construction details of proposed drainage structures including inlets, outlets, manholes, pipes, headwalls and all other proposed drainage structures;
 - e) The location of wetlands and waterbodies within one hundred feet of the site. The boundaries of wetland areas shall be approved by the Duxbury Conservation Commission.
 - f) Drainage calculations prepared by a registered professional engineer, licensed in the Commonwealth of Massachusetts.

All drainage systems must be constructed to adequately dispose of surface water generated on that property and to have low maintenance.

Consideration must be given to the location of snow piles and where meltwater will travel. This must be accounted for in the drainage design.

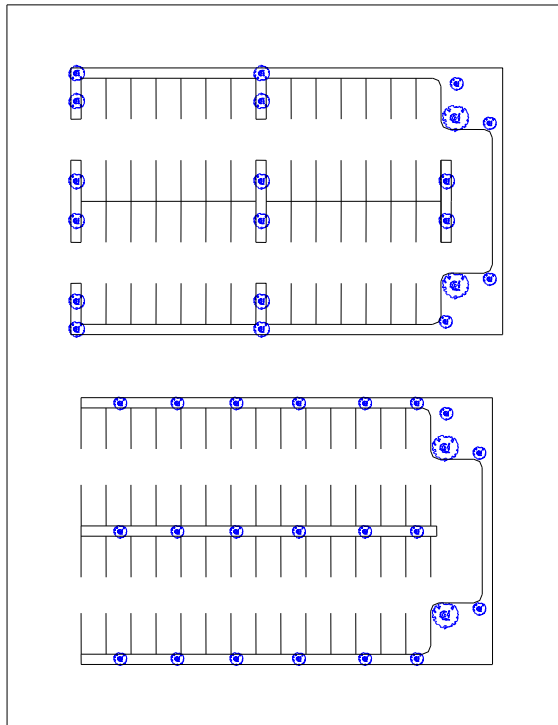
603.7 Lighting

Where lighting is needed, it shall be designed and located so as to provide sufficient illumination of the ground below, for the safe passage and identification of vehicles and pedestrians in the immediate areas and directed away from any public or private way or adjacent property. An average of three- to five-foot candle lighting level throughout the parking area shall be required for safe and sufficient illumination. Lighting shall not

be projected from the lighting fixture in excess of a forty-five degree angle above the parking lot. Where lighting levels in excess of the above average are deemed necessary by owners, lessees or others exercising control of said parking areas, the Board of Appeals may grant a Special Permit for lighting level in excess of five foot candles. The type and height of lighting fixtures is subject to review by the Board of Appeals and the Design Review Board.

603.8 Landscaping

1. In large parking areas with fifty or more spaces, the parking lot shall be subdivided by landscaped islands. The landscaped islands shall have a width of not less than three feet and shall be planted with bushes and mulched. One tree or bush shall be provided for every five parking spaces. The diagram below illustrates two alternative types of parking for landscaping.
2. A landscaped elevated berm shall be provided adjacent to the traveled way to separate parking and other uses from the road. This buffer strip shall be planted with grass and shrubs or trees. Plantings must not obstruct the clear sight distance of driveways.
3. Storage and loading areas, dumpsters, utility buildings, machinery and other unsightly uses shall be screened from view by a tight fence or dense plantings.
4. All areas that are landscaped must be properly maintained. Trees and shrubs that die must be replaced within one growing season.
5. Parking areas that abut the Residential Compatibility District shall provide a ten-foot (10') landscaped buffer strip that will adequately screen the parking lot from residential buildings. Trees, hedges, bushes, berms or tight fences shall be provided. All landscaped areas shall be properly maintained. Shrubs or trees that die must be replaced within one (1) growing season.



603.9 Mixed Uses

In the case of mixed uses, the required parking spaces shall be the sum of the requirements of the individual uses computed separately. Parking facilities for one use shall not be considered as providing the required parking spaces for any other use unless it can be clearly demonstrated that the need for parking occurs at different times.

603.10 Entrance Requirements

- 1. Curb Cuts:** The number of curb cuts on state and local roadways shall be minimized in order to promote the orderly flow of traffic on public streets and provide for pedestrian safety. The number of driveways shall be limited to two per street line. To the extent feasible, access to business shall be provided by one of the following:
 - a) Access via a common driveway serving adjacent lots or businesses;
 - b) Access via an existing side street;
 - c) Access via a cul-de-sac or loop road that serves adjacent lots or business.
- 2. Width:** The width of an entrance or exit for one-way traffic shall not be less than twelve (12') feet wide. The width of a driveway for two way traffic shall be twenty-four (24') feet wide. Both shall have the appropriate radius curbing installed.
- 3. Sight Distance:** All driveways serving a business must comply with the corner clearance requirements of this section. Parking plans shall include delineation of the clear sight triangle. Clear sight distance at the intersection of a driveway serving a business and an existing way shall be defined by a clear sight triangle at the intersection. Two sides of the triangle shall coincide with the centerline of the access road and the existing way respectively. The third side of the triangle, measured from the centerline of the access road at a point thirty (30') feet from the centerline of the existing way, shall be identified as the clear sight distance. Depending on the speed limit along the existing way, the minimum sight distance shall be as follows:

Maximum Design Approach Speed	Clear Sight Distance
45 mph*	350 feet
35 mph	250 feet
25 mph	150 feet

*miles per hour

Measurements of the clear sight distance shall be based on a line of sight at a level three and one-half (3.5) feet above road surface at each end of the clear sight distance.

Inside the clear sight triangle, no vision-obstructing object or landscaping shall be permitted between a height of three and one-half (3.5') feet and eight (8') feet above the plane identified by the adjacent curb grades.

603.11 Loading Zones

Areas for loading and unloading shall be provided in all parking lots. They shall be of sufficient size to accommodate all vehicles making routine deliveries to the facility. The location of the loading areas shall be designed so that trucks can maneuver safely and conveniently to and from the public way and, when in use, vehicles do not block the public way, any parking space or parking lot aisle. The areas used for the loading zone cannot be used for parking.

603.12 Handicapped Parking

All parking lots shall provide for handicapped parking in accordance with the Rules and Regulations of the Architectural Access Board, 521 CMR 1.00-3.00.

603.13 Erosion Control

During and after construction all soils, mulch, wood chips, etc. will be confined to the property.

603.14 Location of Facilities

Required off-street parking facilities shall be provided on the same lot. Where the requirements of the section cannot be met on the same lot, the Board of Appeals may, by Special Permit, allow the provision of the required parking on any lot in the same zoning district and in the same ownership within three hundred (300') feet of the use served or on a municipal parking lot located within three hundred feet of the use served.

603.15 Change of Use

Whenever there is an expansion or change of the use of a property which necessitates an increase of more than twenty percent (20%) of the required parking as measured by the parameters of this Bylaw, the required parking facilities shall be provided.

603.16 Restrictions

Parking areas shall be used for registered motor vehicle parking only, with no sales, dead storage, repair work, dismantling or servicing of any kind. The required parking areas shall be permanently available for use by patrons and employees of establishments for which such space was provided.

609 DEMOLITION OF HISTORICALLY SIGNIFICANT BUILDINGS

609.1 Purpose

This Bylaw is adopted to protect and preserve buildings and structures within the Town, which reflect or constitute distinctive features of the architectural, cultural, economic, political, or social history of the Town and to encourage the preservation and restoration rather than demolition of such buildings and structures. By furthering these purposes, the public welfare shall be promoted, making the Town a more attractive and desirable place in which to live, learn and work.

609.2 Definitions

Demolition

The intentional act of pulling down, destroying, removing, or razing a building or structure or commencing the work of total or substantial destruction with intent of completing same.

Regulated Buildings or Structures

The provisions of this Bylaw shall apply only to buildings or structures which in whole or in part were built seventy-five (75) years or more prior to the date of the application for a demolition permit and are:

- a) Listed or eligible to be listed on the National Register of Historic Places, or on the State Register of Historic Places; or
- b) Associated with one or more historic persons or events, or with broad architectural, cultural, economic, political or social history of the Town; or
- c) Historically or architecturally significant in terms of period style, method of building construction or association with a significant architect or builder either by itself or as part of a group of buildings.

609.3 Procedures

No permit for the demolition of any building or structure shall be issued other than in conformity with this Bylaw. Upon receipt of an application for a demolition permit, the Zoning Enforcement Officer shall forward a copy to the Historical Commission and to the Planning Director.

Within thirty (30) business days of receipt of the application from the Zoning Enforcement Officer to the Commission, the Commission shall make a determination whether or not the building or structure is a "regulated building or structure." If the Commission determines that the building or structure is not regulated by this Bylaw, it shall sign the permit immediately and forward it to the Zoning Enforcement Officer who shall issue the permit.

If the Commission determines that the building or structure is regulated by this Bylaw, it shall review the application for demolition at a public hearing to be held within twenty (20) business days of determining that the building or structure is a regulated building or structure. The Commission shall publish a notice of the hearing in a newspaper of local circulation during each of the two weeks preceding the date of the public hearing, noting the date, location and subject of the hearing. Such notice shall be paid for by the applicant for a demolition permit. The Commission shall also mail, certified return

receipt, a copy of said notice to the applicant, and, by regular mail, to the owners of all properties within three hundred (300') feet of the regulated building's or structure's property as they appear on the most recent real estate tax list of the Board of Assessors; and the Planning Board.

No less than ten (10) business days after the public hearing on the demolition permit, the Commission shall make its determination and notify the applicant in writing stating its reasons with a copy to the Zoning Enforcement Officer and Planning Director.

If a determination is made that the building or structure is historically significant meeting one of the three criteria of a "regulated building or structure," the Zoning Enforcement Officer shall not issue a demolition permit for a period of six (6) months from the date of notification to the Zoning Enforcement Officer.

Once the Commission determines the building or structure is historically significant and demolition should be delayed, the Commission shall invite the owner of record of the building, the Zoning Enforcement Officer, the Planning Director, and a representative of the Design Review Board to participate in an investigation of alternatives to demolition including but not limited to incorporation of the building or structure; utilization of financial incentives to rehabilitate the building or structure; seeking new owners willing to purchase and preserve, restore or rehabilitate the building or structure, or moving the building or structure.

The Zoning Enforcement Officer may issue a demolition permit prior to the expiration of the six (6) month period after receiving written notice from the Commission that:

- a) The Commission is satisfied that there is no reasonable likelihood that either the owner or some other person or group is willing to purchase, preserve, rehabilitate, restore or relocate such building or structure; or
- b) The Commission is satisfied that the owner has made continuing, bona fide, and reasonable efforts to locate a purchaser to preserve, rehabilitate, restore or relocate the subject building or structure, and that such efforts have been unsuccessful. These efforts could include, but not be limited to, listing the building with a realtor or realtors, advertising in local general circulation newspapers; and advertising in one Boston general circulation newspaper; or
- c) The applicant has agreed to accept specific conditions approved by the Commission.

In an emergency, nothing in this Bylaw shall prohibit the Zoning Enforcement Officer from exercising the authority of G. L. c. 143, but the Zoning Enforcement Officer shall make every reasonable effort to inform the Commission of his actions in such an emergency.

610 WIRELESS TELECOMMUNICATIONS SERVICES FACILITIES

610.1 Purpose

The purpose of this section is to regulate the design and location of wireless telecommunications service facilities in a manner that minimizes the visual and environmental impacts of such facilities consistent with both the requirements of the Federal Telecommunications Act of 1996, 47 U.S. C. sec 332(c) et seq., and rights conferred to local government thereby. The standards set forth herein are intended to preserve the safety, character, appearance, property values, natural resources and historic structures of the Town; mitigate adverse visual effects through proper design, location and screening; encourage co-location of antennas on a structure where feasible in order to minimize the number of sites and structures required; encourage location of antennas on existing towers; and protect the Town from the effects of uncontrolled development and location of wireless telecommunications towers, wireless service facilities and accessory structures, while recognizing federally granted rights of carriers to provided necessary and marketable telecommunications services and the desire of the public and the Town departments to access and utilize new technologies.

610.2 Scope

In addition to any applicable sections of the Protective Bylaw, Section 610 shall apply to all wireless telecommunications service antennas and tower related equipment, fixtures and enclosures, including any modifications to any of these, but shall not apply to Police, Fire, ambulance or any other communications systems used by the Town, amateur ham radio or citizens band radio antennas, or non-transmitting television antennas.

610.3 Definitions

Above Ground Level (AGL)

A measure of vertical distance from the average existing natural grade of a site at the base of a wireless service structure to a point of a structure.

Antenna

The surface from which wireless radio signals are sent and/or received by a wireless service facility.

Camouflaged

A wireless service facility that is disguised, hidden, part of an existing or proposed structure or placed within an existing or proposed structure is considered "camouflaged".

Carrier

A company that provides wireless service.

Co-location

The use of a single mount on the ground by more than one carrier (vertical co-location) and/or several mounts on an existing building or structure by more than one carrier.

Environmental Assessment (EA)

An EA is the document required by the Federal Communications Commission (FCC) and the National Environmental Policy Act (NEPA) when a wireless service facility is placed in certain designated areas.

Equipment Shelter

An accessory, enclosed structure, cabinet, shed or box at the base of the mount within which are housed batteries and electrical equipment.

Fall Zone

The area on the ground within a prescribed radius from the base of a wireless service facility. The fall zone is the area within which there is a potential hazard from falling debris (such as ice) or collapsing material.

Guyed Tower

A monopole or lattice tower that is secured to the ground or other surface by diagonal cables.

Licensed Carrier

A company authorized by the FCC to construct and operate a commercial mobile radio services system.

Monopole

The type of mount that is self-supporting with a single shaft of wood, steel or concrete and a platform (or racks) for panel antennas arrayed at the top.

Mount

The structure or surface upon which antennas are mounted, including the following four types of mounts:

- 1) Roof-mounted. Mounted on the roof of a building.
- 2) Side-mounted. Mounted on the side of a building.
- 3) Ground-mounted. Mounted on the ground.
- 4) Structure-mounted. Mounted on a structure other than a building.

Omnidirectional (Whip) Antenna

A thin rod that transmits and/or receives a signal in all directions.

Panel Antenna

A flat surface antenna usually developed in multiples.

Radio Frequency Engineer (RF)

An engineer specializing in electrical or microwave engineering, especially the study of radio frequencies.

Radio Frequency Emission

The emissions from wireless service facilities.

Security Barrier

A locked, impenetrable wall, fence or berm that encloses an area to prevent unauthorized entry or trespass.

Telecommunications Specialist

A qualified professional with expertise in monitoring of electromagnetic fields and telecommunications engineering who has a record of service to municipalities.

Tower

A structure that is intended to support equipment used to receive and/or transmit electromagnetic waves. Design examples include: lattice tower (self-supporting with multiple legs and cross-bracing structural steel) and monopole (self-supporting with a single shaft).

Wireless Telecommunications Service Facility

Facility, fixture, structure or equipment for the provision of wireless services for resale or lease, as defined by the Federal Telecommunications Act, used or intended for use by a public utility or an FCC-licensed carrier.

Wireless Telecommunications Services

All forms of wireless communication included in the definition in the Federal Telecommunications Act of 1996, including commercial mobile radio services, licensed wireless services, common carrier wireless exchange services and other forms of wireless communication of a similar nature. Common carrier wireless exchange services include cellular telephone services, communications systems and paging services, wireless computer networking, wireless internet access and wireless communication services of a similar nature. Wireless telecommunications services shall not be construed to include a telephone exchange.

610.4 Use Regulations

A wireless telecommunications service facility shall require a building permit in all cases and may be permitted as follows:

1. A wireless telecommunications service facility antenna may be attached to any existing lattice tower, monopole, utility pole, electric utility transmission tower or water tank in any zoning district, except on towers supporting antennas used for citizen's bands, amateur radio, or television receiving antennas, provided that the installation of the new facility does not substantially alter the size or increase the height of the existing structure. Issuance of a building permit for such installations shall require prior site plan approval by the Planning Board in accordance with the applicable requirements and determinants under Section 615. The installation of a wireless telecommunications service facility attached to such existing structure may exceed the height of the existing structure by no more than ten (10) feet, subject to the issuance of a Special Permit by the Board of Appeals and prior site plan approval by the Planning Board.
2. A wireless telecommunications service facility antenna may be installed within any existing church steeple in any zoning district, provided such antenna and accessory equipment is completely enclosed and not visible from outside the structure.
3. A wireless telecommunications service facility antenna may be installed within any structure used exclusively for business in a business district, provided such antennas are completely enclosed and not visible from any adjacent street. Issuance of a building permit for such installations shall require prior site plan approval by the Planning Board in accordance with the applicable requirements and determinants under Section 615.1. The installation of an exterior wireless communication facility antenna

on a structure used exclusively for business in a business district shall not exceed the existing height of the building by more than ten (10) feet, subject to the issuance of a Special Permit by the Board of Appeals and prior site plan approval by the Planning Board.

4. A wireless telecommunications service facility tower and accessory equipment shelter(s) may be constructed provided the maximum tower height shall be one-hundred (100) vertical feet above ground level. Whip antennas may extend a maximum of ten (10) feet above the top of a tower. Such facilities shall require a Special Permit by the Board of Appeals and prior site plan approval by the Planning Board. Guyed towers are prohibited. No more than one such tower may be located on a lot.

5. Wireless telecommunications service facilities and antennas shall not be located:

- a) Within or on residences, business structures within which there is a dwelling unit, schools, nursing homes, or structures of historic significance, and except as otherwise permitted under Section 610.5(2);
- b) Within one-hundred (100) feet, or such greater distance at which radio frequency emissions therefrom can be detected and determined unacceptable by the Duxbury Board of Health, of a dwelling unit, school, nursing home, or structure of historic significance, except where a greater separation is required under Section 610.6(3);
- c) Within any area in which the Telecommunications Specialist has determined that the applicant has adequate coverage and capacity measured by the minimum FCC standards for such coverage and capacity;
- d) In the Dunes Protection District and Wetlands Protection Overlay District or in wetlands, wetland buffer areas or other environmentally sensitive natural areas that are subject to the jurisdiction of the Conservation Commission under the Massachusetts Wetlands Protection Act, the Duxbury Wetlands Bylaw or this Bylaw, without approval of the Conservation Commission. All proposals shall be subject to review by the Conservation Commission as authorized by state and local regulations.

610.5 Dimensional Requirements

1. Height

- a) Height shall be one-hundred (100) vertical feet above ground level. Whip antennas may extend a maximum of ten (10) feet above the top of a tower. The maximum height of any equipment shelter shall be twelve (12) feet above ground level.
- b) Existing structures. New wireless telecommunication service antennas may be attached to any existing tower, monopole, utility pole, electric transmission tower or water tank in any zoning district, except on towers supporting antennas used for citizen's bands, amateur radio, or television receiving antennas, provided that such structure is not increased in vertical height or substantially altered except for strengthening and maintenance. Installation of a wireless service facility on such existing structure may exceed

the height of the original structure by up to ten (10) vertical feet, subject to a Special Permit by the Board of Appeals and prior site plan approval by the Planning Board.

c) Business District. The installation of a wireless telecommunication service facility antenna on a business structure shall not exceed the maximum vertical height of the original structure by more than ten (10) feet, subject to issuance of a Special Permit by the Board of Appeals and prior site plan approval by the Planning Board.

2) Setback from Side Lot Lines and Street. Any wireless telecommunications service tower shall be set back from adjacent lot lines and any street line by the sum of its vertical height above ground level and the height of the highest attached whip antenna above the structure, or by its fall zone, whichever is greater.

3) Setback from Nearest Dwelling Unit. The minimum distance from the center of the tower base of any wireless telecommunications service tower to a dwelling unit located on adjacent or nearby property shall be four hundred (400) feet.

4. Equipment Shelters. An equipment shelter accessory to a tower shall not exceed an aggregate of eight hundred (800) square feet in structure footprint. No more than one (1) such above-ground auxiliary structure shall be constructed.

610.6 Approval Standards

Approval Standards. In addition to the standards for Special Permits under Section 906.2 of the Bylaw, all wireless telecommunications service facilities and any equipment shelters shall meet the following standards:

1. Federal and State Requirements. Wireless telecommunications service facilities and equipment shelter shall be constructed, installed, maintained and used in compliance with all applicable Federal and State laws, rules and regulations.

2. Visibility. Wireless telecommunications service facilities shall be as unobtrusive as possible and, if mounted on a business structure, shall be compatible with the style and color of the structure upon which it is located.

a) Camouflage. Where a wireless telecommunications service facility extends over the roof height of a business structure on which it is mounted, every reasonable effort shall be made to conceal the facility within or behind architectural features to limit its visibility from streets and adjacent properties. Facilities mounted on a roof shall be stepped back from the front façade in order to mitigate impact on the building silhouette. Wireless telecommunications service facilities that are side-mounted shall blend with the existing structure's architecture and, if over five (5) square feet, shall be painted or screened with material that is consistent with the design features and materials of the building.

b) Color. Wireless telecommunications service facilities that are side-mounted or top-mounted on business structures shall be painted or constructed of materials to match the color of the building material to which they are attached. All other facilities including towers shall be painted or finished in light gray / blue hue that blends with sky and clouds, shall not be lighted, and shall not be painted with hazard paint.

- c) Existing on-site vegetation shall be preserved to the maximum extent practicable.
3. Co-Location. To the extent feasible, licensed carriers and Town communication systems shall co-locate on a single wireless telecommunications service monopole or tower. The Town shall reserve the right to place its communications antenna(s) within the top twenty (20) percent of the vertical height above ground level of any monopole or tower in order to accommodate its communications needs. It shall remain the licensed carrier's responsibility to ensure that the installation or location of other antenna(s) on the monopole or tower does not cause interference with the Town's communications system. Such facility shall be designed insofar as is reasonable to structurally accommodate foreseeable future users. A new tower or monopole facility shall be considered only upon a finding that existing or approved structures or facilities cannot accommodate the equipment planned for the proposed facility.
 4. Fencing. Fencing at least eight (8) feet in height shall be erected around the base of any wireless telecommunications service tower or monopole and any equipment shelter sufficient to prevent public entry to the facility. Barbed wire is prohibited.
 5. Plantings. A dense hedge of fast-growing, evergreen material shall be planted and maintained around the exterior of required fencing. This material shall not be less than four (4) feet in height when planted. The Board of Appeals may require that evergreen trees and/or other suitable material be planted between a wireless telecommunications tower facility and residential units.
 6. Signs. No exterior signs shall be installed on a wireless telecommunications service tower, equipment shelter, surrounding property or fence, except as necessary for security, safety, and to identify the property.
 7. Lighting. Lighting of an equipment shelter or a wireless telecommunications service tower is prohibited except insofar as required for security and maintenance purposes at ground story level. Such lighting shall be shielded from adjacent properties by a total cutoff of light at the property line, and foot-candle measurements at the property line shall be 0.0 foot-candles when measured at grade.
 8. Noise. Ground-mounted equipment for wireless telecommunication service facilities shall not generate noise in excess of fifty (50) dB at the property line. Roof-mounted or side-mounted equipment for wireless telecommunications service facilities shall not generate noise in excess of fifty (50) dB at ground level at the base of the building closest to the antenna.
 9. Radio Frequency Radiation (RFR) Standards. All equipment proposed for a wireless telecommunications service facility shall be authorized in accordance with the FCC Guidelines for Evaluating the Environmental Effects of Radio Frequency Radiation.
 10. Fumes and Hazardous Waste. The generation of noxious fumes and the storage or disposal of hazardous waste on the site of a wireless telecommunications service facility is prohibited.
 11. Access. Any driveway required to construct and maintain a wireless telecommunications service tower shall not be paved and shall minimize cut and fill and vegetation removal to the maximum extent practicable.

12. Utilities. Any utility lines to serve a wireless telecommunications tower facility shall be placed underground.

610.7 Administration

1. Special Permit Granting Authority. The Special Permit granting authority shall be the Board of Appeals, which shall review and decide applications for wireless telecommunication service facilities that require the issuance of a Special Permit under Section 610.4 Use Regulations, in accordance with the procedures and standards set forth in Sections 906.2 and 906.4, the requirements and standards of Section 610, and the findings and conclusions of the Planning Board pursuant to Section 615.

2. Site Plan Approval. The site plan approval authority shall be the Planning Board, which shall report its findings and conclusions under Section 615, and any regulations it may adopt, to the Zoning Enforcement Officer within twenty-five (25) days of receipt of an application for a building permit for a wireless telecommunications service facility antenna that does not require a Special Permit under Section 610.5. For those wireless telecommunication service facilities that require a Special Permit under Section 610.4, the Planning Board shall report its findings and conclusions under Section 615, and any regulations it may adopt, to the Board of Appeals five (5) days prior to the public hearing on the Special Permit application.

3. Submission Requirements

a) An application for a building permit for the installation of a wireless telecommunications service facility antenna that does not require a Special Permit under Section 610.4 shall include for submission to the Zoning Enforcement Officer seventeen (17) copies of a site plan(s) that shall meet the applicable requirements of Section 615, and shall provide such other information as is necessary to show compliance with the applicable provisions and standards of Section 610 and any regulations adopted by the Planning Board. Such plan(s) shall also be submitted by the applicant to the Planning Board.

b) An application for a Special Permit for the construction of a wireless telecommunications service facility shall, in addition to the above submission requirements, include for submission to the Board of Appeals seventeen (17) copies of the following:

(i) The name, address, telephone number, and original signature of any applicant(s), who shall include a licensed telecommunications carrier.

(ii) Identification of the subject property by name of nearest ways, street address, assessors map parcel number.

(iii) A map, to scale, showing lot lines of the subject property, the location of all buildings and accessory structures on all properties within 300 feet of the proposed wireless services facility and within 1000 feet of a proposed tower, property lines of all properties adjacent to the subject property within 300 feet of the subject property line, location of the proposed wireless telecommunication services facility and any equipment shelter, location of any existing ways on the subject property, and any proposed driveway for the wireless telecommunication service facility.

- (iv) Proposed changes to the subject property, including grading, vegetation removal and drainage prepared by a registered civil engineer, and a landscaping plan prepared by a registered landscape architect.
- (v) Plans and elevations, dimensioned and to scale, and specifications of any proposed structure, mount, antennas, equipment shelter, signs, plant material, fencing and buffers, showing location on building façade or roof, height above building roof and existing grade, dimensions, materials, color and camouflage, parking area, and any other construction attendant to the facility.
- (vi) A map showing the anticipated range of coverage for a proposed wireless telecommunications service facility and the location and range of coverage of any existing wireless telecommunications facility within six (6) miles of the subject property.
- (vii) Where a wireless telecommunications tower is proposed, a map showing the farthest point from which the facility will be visible and eight (8) view lines in a one (1) mile radius from the subject property, beginning at True North and continuing clockwise at forty-five (45) degree intervals. Two (2) weeks prior to the public hearing, the Board of Appeals may require the applicant to float a balloon or use a crane test at the location of the facility, at its maximum proposed elevation, to demonstrate its height and visibility from Town ways and neighborhood dwelling units. The balloon shall be at least four (4) feet in diameter. The time and date of this demonstration, and a rain date, shall be advertised in a newspaper of general circulation in the Town one (1) week prior to the test, such advertisement to be paid for by the applicant.
- (viii) An explanation shall be submitted as to the reasons and process used in selecting a site for the construction or installation of a wireless telecommunications service facility and other alternatives explored.
- (ix) Where a wireless telecommunications tower is proposed, a report shall be required for a registered structural engineer on safety aspects. The report shall include manufacturer's specifications for a proposed tower describing the reasons for its design, safety aspects, its capacity for co-location, including the location, number and type of antennas it can accommodate.
- (x) Where there are existing dwelling units within one thousand (1000) feet of a proposed wireless telecommunications tower or monopole, the applicant shall submit sight line graphs or photographic superimpositions showing the appearance of the tower at completion from the three (3) dwellings that are closest or most significantly affected.
- (xi) Copies of submittals to all state and Federal agencies pertaining to licensing shall be submitted, and if a tower or monopole is proposed, documentation from the Federal Aviation Administration (FAA) must be submitted stating that it has determined that hazard lighting and paint are not required. Prior to the issuance of a building permit, copies of the FCC

license, and any other required Federal or state licenses, shall be submitted to the Zoning Enforcement Officer.

(xii) Any required environmental assessment under the National Environmental Policy Act (NEPA), and/or by the FCC, shall be submitted.

(xiii) Any materials proposed for use within a wireless telecommunications service facility that are considered hazardous under state, Federal, or local laws shall be listed by location, type, and amount, including trace elements.

(xiv) An ambient emissions baseline reading and plan for continuous monitoring and certification by a radio frequency engineer, stating that radio frequency emission measurements are accurate and meet FCC and state guidelines, shall be submitted, as well as the maximum projected range of emissions from any wireless telecommunications facility.

(xv) If lighting at ground-story level is proposed for security and maintenance purposes, the applicant shall indicate the locations and types of lighting proposed and submit a manufacturer's computer-generated, point-to-point printout, indicating the horizontal foot-candles at grade within the site, and twenty-five (25) feet beyond the property lines.

4. Referral. The Board of Appeals shall refer a Special Permit application and all related submittals, plans, and statements to Town boards and commissions for their written comments and recommendations pursuant to Section 906.4.

5. Telecommunications Specialists. The Planning Board and the Board of Appeals may each hire a telecommunications specialist as they deem necessary to assist with their respective reviews of an application for a building permit or Special Permit under this Bylaw. The boards may adopt regulations establishing a fee for such professional services to be paid by the applicant(s).

6. Monitoring and Maintenance. The owner/operator of any wireless telecommunications service facility shall annually, after the issuance of a certificate of zoning compliance by the Zoning Enforcement Officer under Section 904.2, submit calculations of cumulative radio frequency emissions levels to the Zoning Enforcement Officer and Board of Health. The calculations shall be signed and certified by a registered radio frequency engineer and shall include a statement that they meet the emissions standards of the FCC and Massachusetts Department of Health. The owner/operator shall maintain a facility in good appearance and operating condition including structural repair, painting of the facility and equipment shelter, and maintenance of fencing, screening, and landscaping.

7. Fees.

a) A performance bond equal to the removal cost of the proposed wireless telecommunications service facility and restoration of the site may be required as a condition of approval, such bond to be submitted to the Zoning Enforcement Officer prior to issuance of a building permit, and held by the Town Treasurer.

b) In addition to a building permit fee, a monitoring fee to be determined by the Zoning Enforcement Officer shall be required and used to create and

maintain an inventory of all wireless telecommunications service antennas in the Town and to monitor emissions and maintenance.

8. Proof of Continued Operation. The owner/operator or successor shall, prior to January 1 of each year subsequent to the date of issuance of a certificate of zoning compliance for a wireless telecommunications service facility, file a signed affidavit with the Zoning Enforcement Officer and Town clerk stating that the facility is in operation. Failure to do so shall be construed as meaning the facility is no longer in use.

9. Amendment of Special Permit. If at any time after the issuance of a Special Permit, the FAA notifies the owner/operator that hazard lighting and paint are required for a wireless telecommunications service tower, the owner/operator shall notify the Zoning Enforcement Officer and Board of Appeals, and shall file a request for an amendment to the Special Permit. The Board of Appeals shall, after a public hearing, determine whether the Special Permit should be rescinded, or amended to require a reduction in the height of such tower, sufficient for a determination by the FAA that hazard lighting and paint are not required.

10. Abandonment. All wireless telecommunications service facilities and equipment shelters not in use for a period of one (1) year shall be dismantled and removed at the owner/operator's expense following notification by the Zoning Enforcement Officer to the owner/operator. The site shall be restored to its pre-construction condition to the extent practicable, with the exception of landscaping improvements. Absent such removal and restoration after notification, the Zoning Enforcement Officer shall initiate action to dismantle a facility and restore the site.

610.8 Validity

The invalidity of any provision of this section shall not render invalid any other provision of this section.

611 LAND CLEARING AND GRADING REGULATION

611.1

The purposes of this Bylaw are to:

1. Protect the health, safety and property of the residents of the Town by regulating clearing and grading activities associated with land development, preserving existing trees and vegetation, preventing erosion and sedimentation of inland and coastal wetlands, ponds and other waterbodies, controlling stormwater runoff, minimizing fragmentation of wildlife habitat and loss of vegetation;
2. Limit land clearing and alteration of natural topography prior to development review;
3. Protect specimen trees and significant forest communities from damage or removal during site development;
4. Protect water quality of adjacent wetlands and surface water bodies;
5. Encourage the use of Best Management Practices that prevent and reduce nonpoint source of pollutants;

6. Promote land development and site planning practices that are responsive to the Town's scenic character without preventing the reasonable development of land;
7. Protect archaeological and/or historic resources.

611.2 Definitions

In this Bylaw, the following words have the meanings indicated:

Applicant

Any person proposing to engage in or engaged in any non-exempt clearing of trees or under-story vegetation or grading within the Town.

Best Management Practices (BMPs)

A structural, nonstructural, or managerial technique recognized to be the most effective and practical means to prevent and reduce nonpoint source pollutants. BMPs should be compatible with the productive use of the resource to which they are applied, and should be cost-effective.

Caliper

American Association of Nurserymen standard for measurement of trunk size of nursery stock. Caliper of the trunk shall be taken 6 inches above the ground up to and including 4-inch caliper tree, and 12 inches above the ground for larger sizes.

Certified Arborist

A professional who possesses the technical competence through experience and related training to provide for or supervise the maintenance of trees and other woody plants in the residential, commercial, and public landscape.

Clearing

Removal or causing to be removed, through either direct or indirect actions, trees, shrubs, sand and gravel and/or topsoil from a site, or any material change in the use or appearance of the land. Actions considered to be clearing include, but are not limited to: causing irreversible damage to roots or trunks; destroying the structural integrity of vegetation; and/or any filling, excavating, grading, or trenching in the root area of a tree which has the potential to cause irreversible damage.

Dripline

An area encircling the base of a tree which is delineated by a vertical line extending from the outerlimit of a tree's branch tips down to the ground.

Essential Root Zone

An area located on the ground between the tree trunk and 10 feet beyond the drip-line of a tree which is required for protection of a tree's root system.

Diameter/Diameter-Breast-Height(dbh)

The diameter of any tree trunk, measured at 4.5 feet above existing grade.

Filling

The act of transporting or placing (by any manner or mechanism) material from, to, or on any soil surface or natural vegetation.

Grading

Any excavating, filling, clearing, or the creation of impervious surface, or any combination thereof, which alters the existing surface of the land.

Hazardous Tree

A tree with a structural defect or disease, or which impedes safe sight distance or traffic flow, or otherwise currently poses a threat to life or property.

Landscape Architect

A person licensed by the Commonwealth of Massachusetts to engage in the practice of landscape architecture.

Protected Tree/Vegetation

A tree or area of understory vegetation identified on an approved landscape plan to be retained and protected during construction.

Specimen Tree

A native, introduced or naturalized tree that is important because of its impact on community character, its significance in the historic/cultural landscape or its value in enhancing the effects of wildlife habitat. Any tree with a dbh of 6 inches or larger is eligible to be considered a specimen tree. Trees that have a small height at maturity or are slow growing, such as flowering dogwood or American holly with a dbh of four (4) inches or larger are eligible to be considered specimen trees.

Significant Forest Community

Unfragmented forests including forest types that provide habitat for rare species, unusual ecological processes, highly diverse forest communities, rare forest types, and those forest types which maintain connections between similar or different habitat patches.

Site Alteration Special Permit

A Special Permit issued by the Planning Board authorizing land clearing and grading activities in the Town.

Understory Vegetation

Small trees, shrubs, and groundcover plants, growing beneath and shaded by the canopy of trees.

611.3 Applicability

The Special Permit Granting Authority under Section 611 shall be the Planning Board. No person shall undertake clearing or grading activities of an area greater than 30,000 square feet at any one time or in increments such that the total land area of abutting property within the control of any person graded in a thirty-six (36) month period will exceed 30,000 square feet, without first obtaining a Site Alteration Special Permit from the Planning Board, unless specifically exempted under Section 611.5 of this Bylaw.

611.4 Review and Decision

Upon receipt of a completed application and required plans as described in Section 611.6 below, the Planning Board shall transmit one copy each to the Conservation Commission, Zoning Enforcement Officer, Director of Lands and Natural Resources, and Department of Public Works. Within 45 days of receipt of completed application/plans, these agencies shall submit recommendations to the Planning Board. The Planning Board shall act on applications according to the procedure specified in G. L. c. 40A, sec.9 and Section 906.2 of the Zoning Bylaw.

611.5 Exemptions

The provisions of this Bylaw shall not apply to the following activities:

1. Clearing and grading in conjunction with construction of structures intended for residential habitation if the land area to be cleared or graded is less than 30,000 square feet;
2. Removal of hazardous trees, as defined herein;
3. Routine maintenance of vegetation and removal of dead or diseased limbs and/or trees necessary to maintain the health of cultivated plants, to contain noxious weeds and/or vines in accordance with a Department of Environmental Management (DEM) – approved Forest Management Plan, or to remedy a potential fire or health hazard or threat to public safety;
4. Construction and maintenance of public and private streets and utilities within Town-approved roadway layouts and recorded easements;
5. Work conducted in accordance with a valid earth removal permit issued by the Board of Selectmen under Section 8.1 of the General Town Bylaws;
6. Agricultural activities work conducted in accordance with an approved Natural Resource Conservation Service Agricultural Plan;
7. Construction of roadways, associated infrastructure and related slope and view easements for subdivisions shown on a definitive plan approved and endorsed by the Planning Board in accordance with Duxbury Subdivision Rules and Regulations, or a Planned Development approved by the Board of Appeals in accordance with Article 700 of the Zoning Bylaws;
8. Construction or installation of public utilities; and
9. Construction of structures, roadways, parking lots, and associated activities for nonresidential structures or uses in receipt of a Special Permit from the Board of Appeals or Planning Board.
10. Clearing and grading activities in the Dune Protection District in accordance with plans approved and permitted by local, state and federal agencies.

611.6 Application Requirements

The Planning Board may require the submission of some or all of the information listed as 1 through 9 below. Said determination to be made in relation to the extent of clearing proposed by the applicant. For example, the clearing of 35,000 square feet to create a residential dwelling would not typically require the same degree of information

necessitated by a proposal to clear 100,000 square feet of land for a commercial structure.

1. Survey of existing vegetation conducted by an individual qualified through appropriate academic credentials and field experience. A statement of credentials should be submitted with the survey.
 - (a) Major upland vegetational communities located on the site, including trees, shrub layer, ground cover and herbaceous vegetation;
 - (b) Size and height of trees, noting specimen trees and/or forest communities; and
 - (c) Location of any rare and endangered species as mapped by the Massachusetts Natural Heritage Program.
2. Submission of a locus map at a scale of 1" = 500' showing the proposed site in relation to the surrounding area.
3. Submission of a plan at a scale of 1" = 40' of the project site showing existing and proposed contour lines at intervals of not more than 2 feet prepared by a registered land surveyor or a professional engineer.
4. Soil survey or soil logs indicating predominant soil types on the project site, including information on erosion potential from the Natural Resources Conservation Service.
5. Delineation of all bodies of water, including wetlands, vernal pools, streams, ponds, and coastal waters within 100 feet of the project site/limit of work and delineation of the 100-year floodplain.
6. Submission of a plan at a scale of 1" = 40' indicating the limit of work. The limit of work shall include all building, parking, and vehicular use areas, and any grading associated with the proposed development. The plan or accompanying narrative shall document the species and quantities of specimen trees and/or other vegetation to be removed or relocated within the project area.
7. Construction schedule that describes the timing of vegetation removal, transplanting or replacement in relation to other construction activities.
8. Plans and/or description of Best Management Practices to be employed in development of the project site.
9. Submission of an erosion and sedimentation control plan at a scale of 1" = 40'.

This plan shall include BMPs for erosion and sediment control (vegetative and/or structural) to prevent surface water from eroding cut and fill side slopes, road shoulders and other areas and measures to avoid sedimentation of nearby wetlands and ponds. The following information shall be submitted on erosion control and sedimentation plans submitted with the project application:

 - a) Plans and details of any sediment and erosion control structure drawn at a scale of 1" = 40';
 - b) Spillway designs showing calculations and profiles;
 - c) Notes and construction specifications;
 - d) Type of sediment trap;
 - e) Drainage area to any sediment trap;
 - f) Volume of storage required;

- g) Outlet length or pipe sizes; and
- h) A description of the sequence of construction activities that specifies the time frame for soil stabilization and completion and any necessary winter stabilization measures.

611.7 Review Standards

The applicant shall demonstrate that the following measures are employed in the clearing or grading of the site:

1. Minimize site alteration/land clearing:
 - a) Site/building design shall preserve natural topography outside of the development footprint to reduce unnecessary land disturbance and to preserve natural drainage channels on the site.
2. Clearing for utility trenching shall be limited to the minimum area necessary to maneuver a backhoe or other construction equipment. Roots should be cut cleanly rather than pulled or ripped out during utility trenching. Tunneling for utility installation should be utilized wherever feasible to protect root systems of trees.
3. Protect hilltops and/or scenic views within Duxbury:
 - a) Placement of buildings, structures, or parking facilities shall not detract from the site's scenic qualities and shall blend with the natural landscape. Building sites shall be directed away from the crest of hills, and foundations shall be constructed to reflect the natural terrain.
4. Protect wildlife habitat:
 - a) Sites shall be designed in such a way as to avoid impacts to rare and endangered species and wildlife habitat on a site, and to maintain contiguous forested areas.
5. Avoid impacts to archaeological resources:
 - a) Applicants shall submit a response from the Massachusetts Historical Commission (MHC) regarding the potential for archaeological or historical resources on the site.
6. Preserve open space and specimen trees on the site:
 - a) In the design of a development, priority shall be given to retention of existing stands of trees, trees at site perimeter, contiguous vegetation with adjacent sites (particularly existing sites protected through conservation restrictions), and specimen trees.
7. Understory vegetation beneath the dripline of preserved trees shall also be retained in an undisturbed state. During clearing and/or construction activities, all vegetation to be retained shall be surrounded by temporary protective fencing or other measures before any clearing or grading occurs, and maintained until all construction work is completed and the site is cleaned up. Barriers shall be large enough to encompass the essential root zone of all vegetation to be protected. All vegetation within the protective fencing shall be retained in an undisturbed state.
8. Forested areas shall be preserved if they are associated with:
 - a) Significant forest communities as defined herein;
 - b) Wetlands, waterbodies and their buffers;

- c) Critical wildlife habitat areas; and
 - d) Slopes over 25%.
9. Minimize cut and fill in site development:
- a) Development envelopes for structures, driveways, wastewater disposal, lawn areas and utility work shall be designated to limit clearing and grading;
 - b) Other efforts to minimize the clearing and grading on a site associated with construction activities shall be employed, such as parking of construction vehicles, offices/trailers, stockpiling of equipment/materials, etc. in areas already planned for permanent structures. Topsoil shall not be stockpiled in areas of protected trees, wetlands, and/or their vegetated buffers;
 - c) Finished grades should be limited to no greater than a 2:1 slope, while preserving, matching, or blending with the natural contours and undulations of the land to the greatest extent possible;
 - d) Employ proper site management techniques during construction:
 - (i) BMPs shall be employed to avoid detrimental impacts to existing vegetation, soil compaction, and damage to root systems, and
 - (ii) The extent of a site exposed at any one time shall be limited through phasing of construction operations. Effective sequencing shall occur within the boundaries of natural drainage areas;
 - e) Protect the site during construction through adequate erosion and sedimentation controls:
 - (i) Temporary or permanent diversions, berms, grassed waterways, special culverts, shoulder dikes or such other mechanical measures as are necessary may be required by the Planning Board to intercept and divert surface water runoff. Runoff flow shall not be routed through areas of protected vegetation or revegetated slopes and other areas. Temporary runoff from erosion and sedimentation controls shall be directed to BMPs such as vegetated swales. Retaining walls may be required where side slopes are steeper than a ratio of 2:1.
 - (ii) Erosion and sedimentation controls shall be constructed in accordance with the Department of Environmental Protection's Stormwater Guidance manual.
 - (iii) Erosion control measures shall include the use of erosion control matting, mulches and/or temporary or permanent cover crops. Mulch areas damaged from heavy rainfalls, severe storms and construction activity shall be repaired immediately.
 - (iv) Erosion control matting or mulch shall be anchored where plantings are on areas subject to mulch removal by wind or water flows or where side slopes are steeper than 2:1 or exceed ten (10) feet in height. During the months of October through March, when seeding and sodding may be impractical, anchored mulch may be applied at the Planning Board's discretion.
 - (v) Runoff from impervious surfaces shall be recharged on the site by stormwater infiltration basins, vegetated swales, constructed wetlands or

similar systems covered with natural vegetation. Runoff shall not be discharged directly to rivers, streams, or other surface water bodies. Dry wells shall be used only where other methods are not feasible. All such basins and wells shall be preceded by oil, grease, and sediment traps. The inlets of all catch basins shall be fitted with filter fabric during the entire construction process to minimize siltation or such basins shall be designed as temporary siltation basins with provisions made for final cleaning.

(vi) The applicant shall be required to conduct weekly inspections of all erosion and sedimentation control measures on the site to ensure that they are properly functioning as well as to conduct inspections after severe storm events.

f) Revegetate the site immediately after grading:

(i) Proper revegetation techniques shall be employed using native plant species, proper seedbed preparation, fertilizer and mulching to protect germinating plants. Revegetation shall occur on cleared sites within seven (7) calendar days of final grading.

(ii) A minimum of four (4) inches of topsoil shall be placed on all disturbed surfaces that are proposed to be planted.

(iii) Finished grade shall be no higher than the trunk flare(s) of trees to be retained. If a grade change of six (6) inches or more at the base of the tree is proposed, a retaining wall or tree well may be required.

611.8 Required Security

The Planning Board may require a performance guarantee in a form acceptable to the Town to cover the costs associated with compliance with this Bylaw under a Site Alteration Special Permit.

1. The required performance guarantee in the amount of 150% of the cost of site restoration shall be posted prior to the issuance of a Site Alteration Special Permit for the proposed project.

2. The performance guarantee shall be held for the duration of any prescribed maintenance period required by the Planning Board, and may be reduced from time to time to reflect completed work. Securities shall not be fully released without a final inspection and approval of vegetation replacement by the Town.

611.9 Monitoring and Inspections

1. Prior to commencement of construction, the applicant, land owner, contractor and construction crew, Director of the Department of Public Works, Zoning Enforcement Officer or their designee and site engineer shall conduct a meeting to review the proposed construction phasing and number and timing of site inspections.

2. Initial site inspection of erosion and sedimentation controls and placement of tree protection measures shall occur after installation of barriers around preserved areas and construction of all structural erosion and sedimentation controls, but before any clearing or grading has begun.

3. Routine inspections of preserved areas and erosion and sedimentation controls shall be made at varying intervals depending on the extent of site alteration and frequency and intensity of rainfall.
4. Effective stabilization of revegetated areas must be approved by the Town before erosion and sedimentation controls are removed. The Town shall complete an inspection prior to removal of temporary erosion and sedimentation controls.

611.10 Enforcement

The Town may take any or all of the enforcement actions prescribed in this Bylaw to ensure compliance with, and/or remedy a violation of this Bylaw; and/or when immediate danger exists to the public or adjacent property, as determined by the Zoning Enforcement Officer. The Town in carrying out any necessary enforcement actions may use securities described in Section 611.8 above.

1. The Zoning Enforcement Officer may post the site with a Stop Work order directing that all vegetation clearing not authorized under a Site Alteration Permit cease immediately. The issuance of a Stop Work order may include remediation or other requirements that must be met before clearing activities may resume.
2. The Town may, after written notice is provided to the applicant, or after the site has been posted with a Stop Work order, suspend or revoke any Site Alteration Special Permit issued by the Town.
3. No person shall continue clearing in an area covered by a Stop Work order, or during the suspension or revocation of a Site Alteration Special Permit, except work required to correct an imminent safety hazard as prescribed by the Town.

615 ADMINISTRATIVE SITE PLAN REVIEW

615.1 Purpose

The purpose of this Bylaw is to promote functional and aesthetic design, construction, and maintenance of certain developments and to minimize any harmful effects on surrounding areas. Such developments include but are not limited to certain multi-family residential, non-residential or mixed use activities, business and professional offices, government activities, commercial establishments, not-for-profit facilities, medical-service facilities, and public recreational facilities, together with their associated outdoor areas for vehicular movement and parking. Owing to their physical characteristic and the nature of their operations, such developments may affect neighboring properties and adjacent sidewalks and streets. Religious and educational facilities shall be exempt from the provisions of this section of the Bylaw.

The provisions of this section are designed to assure that all development activities regulated by this Bylaw will be carried out so as to provide for and maintain:

1. Protection of neighboring properties against harmful effects of uses on the development site;

2. Convenient and safe access for fire-fighting and emergency rescue vehicles within the development site and in relation to adjacent streets;
3. Convenience and safety of vehicular and pedestrian movement within the development site and in relation to adjacent streets, properties or improvements;
4. Satisfactory methods for drainage of surface water to and from the development site;
5. Satisfactory methods for storage, handling, and disposal of wastewater, refuse, and other wastes resulting from the normal operations of the establishment(s) on the development site;
6. Convenience and safety of off-street loading and unloading of vehicles, goods, products, materials and equipment incidental to the normal operation of the establishment(s) on the development site; and
7. Harmonious relationships to the terrain and to existing buildings in the vicinity of the development site.

615.2 Scope of Application

1. The provisions of this section shall apply to:
 - a) Any construction, demolition, grading, clearing or other land development activity which would add one thousand (1,000) square feet or more of gross floor area or which would under Section 603 require a total of ten (10) or more parking spaces based upon both existing and new development or any change of use which would under Section 603 require ten (10) or more additional parking spaces based only on new development, even if the parking requirements are or could be reduced by provisions of the Zoning Bylaw or actions by a Special Permit Granting Authority;
 - b) The construction or creation of any new parking lot or the expansion, or redesign of any existing parking lot containing ten (10) or more parking spaces, used or to be used for non-residential purposes; and
 - c) Any use or structure, in any zoning district, for which a Special Permit is required, except as provided for below.
2. The provisions of this section shall not apply to:
 - a) Improvements made as shown on a definitive subdivision plan approved by the Duxbury Planning Board;
 - b) Clearing necessary to accomplish soil test borings, percolation tests and similar site testing and investigation; or
 - c) Any activity related to only a single family residential structure;
 - d) Clearing and grading activities in the Dunes Protection District in accordance with plans approved and permitted by local, state, and federal agencies.

615.3 Approved Site Plan/When Required

1. No building permit or occupancy permit shall be issued for any activity or use within the scope of Section 615 herein unless a Site Plan has been approved therefore, and the site is constructed in accordance with said approved site plan.

2. No activity within the scope of Section 615 herein shall be carried out without an approved Site Plan. Any work done in deviation from an approved Site Plan shall be a violation of this Bylaw, unless such deviation is approved in writing by the Planning Board as being of no significant detriment to the achievement of any of the purposes set forth in Section 615 herein.
3. Approval of a Site Plan under this Section shall not substitute for the requirement of obtaining a Special Permit or other forms of relief as required by the Zoning Bylaw.

615.4 Contents of Site Plan

The Site Plan shall include one or more appropriately scaled maps or drawings of the property, drawn to an engineer's scale, and stamped by a Registered Engineer, Registered Architect, Registered Landscape Architect or Registered Land Surveyor, as appropriate to the work involved. The Site Plan shall clearly and accurately indicate the following information as is/are pertinent to the proposed development activity:

1. Legal description, Assessors' Map and Parcel number and address of the property.
2. Name, address and telephone number of the property owner, and applicant, if different than the property owner.
3. Name, address and telephone number of the developer, contractor, engineer, other design professional and agent or legal representative.
4. Complete property dimensions, area, and zoning classification of property.
5. Existing and proposed topographical contours of the property taken at two-foot (2') contour intervals by a registered engineer or registered land surveyor.
6. The nature, location and size of all significant existing natural land features, including, but not limited to, tree, shrub, or brush masses, all individual trees over ten inches(10") in caliper, grassed areas, large surface rock in excess of six feet (6') in diameter and soil features.
7. Location of all wetlands or waterbodies on the property and within one hundred (100') feet of the perimeter of the development activity.
8. The location, grade, and dimensions of all present and/or proposed streets, ways and easements and any other paved surfaces.
9. Engineering cross-sections of proposed new curbs and pavements, and vision triangles measured in feet from any proposed curb cut along the street on which access is proposed.
10. Location, height, elevation, interior and exterior dimensions and uses of all buildings or structures, both proposed and existing; location, number and area of floors; number and type of dwelling units; location of emergency exits, retaining walls, existing and proposed signs.
11. Location of all existing and proposed utilities and storage facilities including sewer connections, septic systems, wells, and any storage tanks, noting applicable approvals, if received.
12. Proposed surface treatment of paved areas and the location and design of drainage systems with drainage calculations prepared by a professional engineer, registered in the Commonwealth of Massachusetts.

13. Complete parking and traffic circulation plan, if applicable, showing location and dimensions of parking stalls, dividers, bumper stops, required buffer areas and planting beds.
14. Lighting plan showing the location, direction, and intensity of existing and proposed external light fixtures.
15. A landscaping plan showing the location, name, number and size of plant types, and the locations and elevation and/or height of planting beds, fences, walls, steps and paths.
16. A location map or other drawing at appropriate scale showing the general location and relation of the property to surrounding areas including, where relevant, the zoning and land use pattern or adjacent properties, the existing street system in the area and location of nearby public facilities.
17. Location within a Historical District and any other designation as a Historically Significant property, and the age and type of each existing building and structure on the site, which is more than fifty (50) years old.
18. Location of site with regard to the APOD (Aquifer Protection Overlay District) as shown on the Duxbury Zoning Map.
19. Location of site with regard to Flood Hazard Areas as regulated by Section 402 of the Zoning Bylaw.

Additional information may be required by the Planning Board or their designee, as reasonably necessary, to make determinations required by this section.

615.5 Site Development Standards

1. A reasonable effort shall be made to conserve and protect natural features that are of some lasting benefit to the site, its environs and the community at large.
2. Slopes, which exceed ten percent (10%), shall be protected by appropriate measures against erosion, runoff, and unstable soil, trees and rocks. Measures shall be taken to stabilize the land surface from unnecessary disruption. Such stabilization measures shall be the responsibility of the property owner.
3. The placement of buildings, structures, fences, lighting, and fixtures on each site shall not interfere with traffic circulation, safety, appropriate use and enjoyment of adjacent properties.
4. All roadway and driveway design shall take into consideration safe sight distances not only at intersections but also along all traveled ways, in accordance with appropriate AASHTO requirements. Clear sight distances shall take into account topography, density of dwelling units and horizontal and vertical alignment.
5. Adequate illumination, in the opinion of the Planning Board, shall be provided to parking lots and other areas for vehicular and pedestrian circulation. In no case shall freestanding illumination devices be installed to a height exceeding fifteen feet (15') in a residential district. All illumination shall be directed and/or shielded so as not to shine beyond the perimeter of the site or interfere with traffic.
6. All areas designed for vehicular use shall be paved with a minimum of either a three inch (3") bituminous asphalt concrete, a six inch (6") Portland cement concrete pavement, or other surface, such as brick, cobblestone or gravel.

7. All parking spaces shall be arranged and clearly marked in accordance with the Parking Lot Design Standards contained in Section 603.5 herein.
8. All utility service transmission systems, including but not limited to water, sewer, natural gas, electrical and telephone lines, shall, whenever practicable, be placed underground.
9. All surface water runoff from structures and impervious surfaces shall be collected on site; but in no case shall surface water drainage be directed across sidewalks or public or private ways. In no case shall surface water runoff be drained directly into wetlands or waterbodies. Drainage systems shall be designed, using Best Management Practices, to minimize the discharge of pollutants by providing appropriately designed vegetated drainage channels and sedimentation basins that allow for adequate settling of suspended solids and maximum infiltration. Dry wells, leaching pits and other similar drainage structures may be used only where other methods are not practicable. Oil, grease and sediments traps to facilitate removal of contaminants shall precede all such drainage structures.

615.6 Minimum Parking Lot Design Standards

1. Parking lots shall comply with the standards and requirements of Section 603 of the Zoning Bylaw.

615.7 Required Procedures for Site Plan Review

1. At least seventeen (17) copies are required of all Site Plan sheets, drawings, and written information. Submissions shall be delivered to the Planning Department.
2. Within five (5) working days of receiving a Site Plan, the Planning Director or his/her designee shall distribute copies of the Site Plan to the Planning Board, the Department of Public Works, the Police Department, the Fire Department, Highway Safety Committee, the Conservation Commission, the Duxbury Bay Management Commission, and the Board of Health. If the proposed activity requires a Special Permit, the Special Permit Granting Authority shall receive a copy of the Site Plan.
3. Upon receipt of a Site Plan from the Planning Director or his/her designee, the agencies as noted in 615.7(2) shall respond in writing as to the propriety of the proposed development, within the context of each agency's jurisdiction. Such response shall be made to the Planning Director or his/her designee within fifteen (15) working days of each agency's receipt of the Site Plan.
4. The Planning Director or his/her designee may solicit the advice of any other Town agency or department he/she deems necessary to properly make the determinations required by this section.
5. Within thirty (30) days after receipt of a completed site plan by the Planning Director, the Planning Board shall review said Site Plan in a public meeting, together with any comments received from Town agencies or departments on said plan. Site Plans shall be reviewed for consistency with zoning and other applicable regulations and standards. Within forty (40) working days of receiving a Site Plan, the Planning Board shall notify the applicant and state reasons for any approval, conditional approval or disapproval.

6. One (1) copy of the approved Site Plan shall be provided each to the applicant , the Department of Inspectional Services, the Department of Public Works, Board of Appeals, Police Department, the Fire Department, the Conservation Commission and the Board of Health. One (1) copy of the approved Site Plan shall remain in the records of the Planning Department.

7. Upon completion of all work, an As-Built plan and a letter of certification, made upon knowledge and belief according to professional standards, shall be submitted to Zoning Enforcement Officer or his/her designee by a Registered Engineer, Registered Architect, Registered Landscape Architect or Registered Land Surveyor, as appropriate to the work involved, that all work has been done substantially in compliance with the approved Site Plan.

616 COMMUNITY-SCALE WIND FACILITIES

616.1 Purpose and Applicability

The purpose of this section is to provide by Special Permit for the construction and operation of Community-Scale Wind Facilities, to generate power for use at municipally owned facilities and to provide standards for the placement, design, construction, monitoring, modification and removal of such Community-Scale Wind Facilities that address public safety, minimize impacts on scenic, natural and historic resources of the Town of Duxbury and to provide adequate financial assurance for operating and decommissioning such Community-Scale Wind Facilities.

This section applies to all Community-Scale Wind Facilities proposed to be constructed after the effective date of this section. It shall apply to any size turbines, regardless of rated nameplate capacity. Any new Community-Scale Wind Facility or physical modifications to existing Community-Scale Wind Facilities that materially alters the type or increases the size of such facilities or other equipment shall require a Special Permit processed in accordance with this section.

Community-Scale Wind Facilities shall be constructed only in the Publicly Owned Land Overlay District (POLOD) and exclusive of the Dunes Protection District and the Wetlands Protection Overlay District.

616.2 Definitions

Community-Scale Wind Facility

A Community-Scale Wind Facility is a Wind Facility where the primary use of the facility is to generate electrical power for use by the Town, inclusive of all equipment, machinery and structures utilized in connection with the conversion of wind energy to electricity. This includes, but is not limited to, transmission, storage, collection and supply equipment, substations, transformers, service and access roads, and one or more Wind Facility.

Height

When referring to a Community-Scale Wind Facility, the height of a Wind Facility will be measured from natural grade to the tip of the rotor blade at its highest point.

Nacelle

The housing around the electrical generator and other systems such as gearboxes and blade controls on a wind turbine. The rotor blades are typically connected to the nacelle.

Rated Nameplate Capacity

The maximum rated output of electric power production equipment. This output is typically specified by the manufacturer with a "nameplate" on the equipment.

Setback

The distance from the base of the Community-Scale Wind Facility tower, measured from the centerline of the Community-Scale Wind Facility tower, to the nearest property line.

Special Permit Granting Authority

The Special Permit Granting Authority shall be the Planning Board.

Wind Monitoring or Meteorological Tower

A temporary tower (Met. Tower) equipped with devices to measure wind speeds and direction used to determine how much wind power a site can be expected to generate.

Wind Facility

A wind turbine device that converts kinetic wind energy into rotational energy that drives an electrical generator. A Wind Facility typically consists of a tower, nacelle body at the top of the tower, and a rotor with two or more blades, also known as a Horizontal- Axis Wind Turbine configuration. However, a Wind Facility could also consist of a Vertical-Axis Wind Turbine configuration. (Refer to Wind Turbine Configurations diagram 616.2a below.)

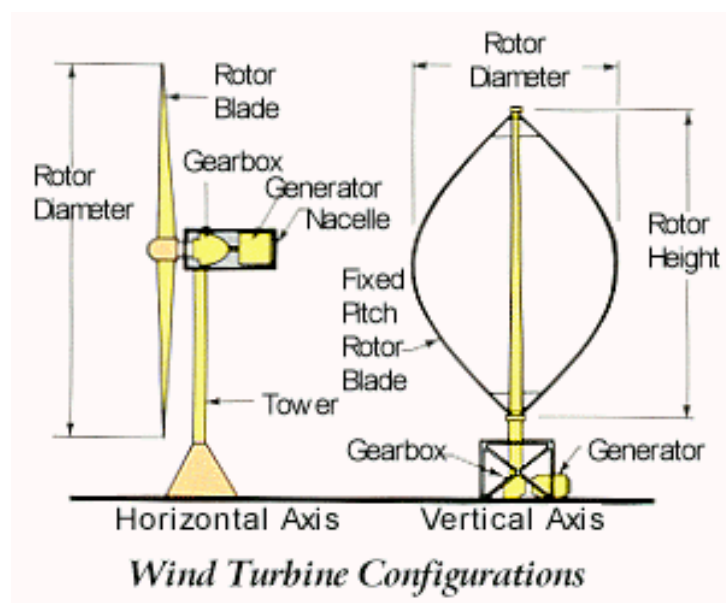


Diagram 616.2a

616.3 Permitting

1. Special Permit Granting Authority. No Community-Scale Wind Facility shall be erected, constructed, installed or modified as provided in this section without first obtaining a Special Permit from the Special Permit Granting Authority (a "Special Permit"). The construction of a Community-Scale Wind Facility shall comply with all requirements set forth in sections 616.3, 616.4, 616.5 and 616.6. All such Community-Scale Wind Facilities shall be constructed and operated in a manner that minimizes any adverse visual, safety, and environmental impacts. A Special Permit may be granted if the Special Permit Granting Authority finds that:

- a) The specific site is an appropriate and approved location for such use;
- b) The use is not expected to adversely affect the neighborhood;
- c) There is not expected to be any appreciable hazard to pedestrians, vehicles or wildlife from the use;
- d) Adequate and appropriate infrastructure will be provided for the proper and safe operation of the Community-Scale Wind Facility; and
- e) The requirements of section 616-3-616.10 are complied with in all respects.

Temporary erection of Wind Monitoring or Meteorological Towers shall also be required to be permitted as a temporary structure subject to issuance of a building permit for a temporary structure for not more than eighteen months. Wind Monitoring or Meteorological Towers shall comply with the minimum height, setback, lighting and signage requirements as set forth in section 616.4.

2. Compliance with Laws, Ordinances and Regulations. The construction and operation of all such proposed Community-Scale Wind Facilities shall be consistent with all applicable local, state and federal requirements, including but not limited to all applicable safety, construction, environmental, electrical, communications and aviation requirements.

3. Proof of Liability Insurance. The applicant and all appropriate contractors shall provide evidence of liability insurance in an amount and for a duration sufficient to cover loss or damage to persons and structures occasioned by the failure of the facility or reasonably foreseeable events thereat.

4. Site Control. At the time of its application for a Special Permit, the applicant shall submit documentation of actual or prospective control of the project site sufficient to allow for installation and use of the proposed facility. Documentation shall also include proof of control over setback areas and access roads, if required.

5. Contact Data. The applicant or Community-Scale Wind Facility permit holder shall maintain a phone number, email address, and physical address (all to be posted at

the facility) and identify a responsible individual person for the public to contact with inquiries and complaints throughout the life of the project. Such persons shall be accessible at all times during normal business hours and for emergencies on a 24 hour a day, every day basis. The Special Permit shall specify the requirements for a contact person(s).

616.4 Certain Specific Requirements

1. Height. Community-Scale Wind Facilities and or Monitoring or Meteorological Towers shall be no higher than 250 feet above the current grade of the land.
2. Setbacks. Community-Scale Wind Facilities and or Monitoring or Meteorological Towers shall be set back a minimum distance equal to 1.1 times the overall height of the Wind Facility from the nearest property line and private or public way and a minimum distance equal to two (2) times the overall height of the Wind Facility from the nearest existing residential or commercial structure not owned by the applicant seeking to permit the Community-Scale Wind Facility and or Wind Monitoring or Meteorological Towers. The setback zone for Community-Scale Wind Facilities and or Wind Monitoring or Meteorological Towers can fall within the limits of Wetlands Protection Overlay and the Flood Hazard Overlay Districts.
3. Color and Finish. The Special Permit Granting Authority shall have discretion over the color of the Community-Scale Wind Facility, although a neutral, non-reflective exterior color designed to blend with the surrounding environment is encouraged.
4. Lighting and Signage. No lighting shall be permitted on Community-Scale Wind Facilities and or Monitoring or Meteorological Towers other than lighting required by the Federal Aviation Administration (FAA). Lighting of other parts of the Community-Scale Wind Facility and or Monitoring or Meteorological Towers, such as appurtenant structures, shall be limited to that required for safety and operational purposes, and shall be reasonably shielded from abutting properties. Unless good cause is shown for an exemption, signs on the Community-Scale Wind Facility and or Monitoring or Meteorological Towers shall comply with the requirements of Duxbury's sign regulations, and shall be limited to:
 - a) Those necessary to identify the owner, provide a 24-hour emergency contact phone number, and warn of any danger, whether inherent or perceived;
 - b) Educational signs providing information about the facility and the benefits of renewable energy.Community-Scale Wind Facilities shall not be used for displaying any advertising or signage.
5. Utility Connections. Utility connections from the Community-Scale Wind Facility to the utilities power grid shall be located underground. Electrical transformers for utility interconnections may be above ground if required by the utility provider.

6. Appurtenant Structures. All appurtenant structures to such Community-Scale Wind Facilities shall be subject to reasonable regulations concerning the bulk and height of structures and determining yard sizes, lot area, setbacks, open space, parking and building coverage requirements. All such appurtenant structures, including but not limited to, equipment shelters, storage facilities, transformers, and substations, shall be architecturally compatible with each other and shall be contained within the Wind Facility tower whenever technically and economically feasible. Structures shall only be used for housing of equipment for this particular site. Whenever feasible, structures shall be shielded from view by vegetation or fencing and or located in an underground vault and joined or clustered to avoid adverse visual impacts.

7. Support Towers. Monopole towers are the preferred type of support for Community-Scale Wind Facilities and shall be used unless good cause is shown that a substantial economic hardship or safety consideration merits an alternative.

616.5 Emergency Services

The applicant shall provide a copy of the project summary and site plan to the local emergency services entity, as designated by the Special Permit Granting Authority. Upon request, the applicant shall cooperate with local emergency services in developing an emergency response plan. Wind turbines or other structures part of a Community-Scale Wind Facility shall be designed to prevent unauthorized access.

616.6 Specific Environmental Considerations

1. Shadow/Flicker. Community-Scale Wind Facilities shall be sited in a manner that minimizes shadowing or flicker impacts caused by motion of the rotor blades as they pass in front of the sun. The applicant has the burden of proving that this effect does not have significant adverse impact on neighboring or adjacent uses through either siting or mitigation. It is acknowledged that a degree of shadow/flicker effect results from any wind turbine, and that the existence of some "shadow flicker" alone shall not be cause for the refusal to permit a Community-Scale Wind Facility.

2. Noise. The Community-Scale Wind Facility and associated equipment shall conform with the provisions of the Department of Environmental Protection's, Division of Air Quality Noise Regulations (310 CMR 7.10), unless the Department agrees that those provisions shall not be applicable. A source of sound will be considered to be violating these regulations if the source:

- a) Increases the broadband sound level by more than 10 dB(A) above ambient level, or
- b) Produces a "pure tone" condition, when an octave band center frequency sound pressure level exceeds the two adjacent center frequency sound pressure levels by three (3) decibels or more.

These criteria are measured both at the property line and at the nearest inhabited residence. Ambient is defined as the background A-weighted sound

level that is exceeded ninety percent (90%) of the time measured during equipment hours. The ambient may also be established by other means with consent from the Department of Environmental Protection (DEP). An analysis prepared by a qualified engineer shall be presented to demonstrate compliance with these noise standards.

3. Land Clearing, Soil Erosion and Habitat Impacts. Clearing of natural vegetation shall be limited to that which is reasonably necessary for the construction, operation and maintenance of the Community-Scale Wind Facility and is otherwise prescribed by applicable laws, regulations, and ordinances. Community-Scale Wind Facilities shall be designed to minimize land clearing and fragmentation of open space areas.

616.7 Facility Conditions

The applicant shall maintain the Community-Scale Wind Facility in good condition and as a condition for the Special Permit shall submit with the application a plan for maintaining the Community-Scale Wind Facility in accordance herewith. Maintenance shall include, but not be limited to, painting, structural repairs, and integrity of security measures. Site access shall be maintained to a level acceptable to the local Fire Chief and Emergency Medical Services. The project owner shall be responsible for the cost of maintaining the Community-Scale Wind Facility and any access road, unless accepted as a public way, and the cost of repairing any damage occurring as a result of operation and construction. All material modifications to a Community-Scale Wind Facility made after issuance of the Special Permit shall require approval by the Special Permit Granting Authority as provided in this section.

616.8 Removal

1. Removal Requirements. Any Community-Scale Wind Facility, Wind Monitoring or Meteorological Tower which has reached the end of its useful life, permit term or has been abandoned shall be removed by the facility owner. When the Community-Scale Wind Facility, Wind Monitoring or Meteorological Tower is scheduled to be decommissioned, the applicant shall notify the Special Permit Granting Authority by certified mail of the proposed date of discontinued operations and plans for removal. The owner/operator shall physically remove the Community-Scale Wind Facility, Wind Monitoring or Meteorological Tower no more than 150 days after the date of discontinued operations. At the time of removal, the Community-Scale Wind Facility, Wind Monitoring or Meteorological Tower site shall be restored to the state it was in before the facility was constructed, or to other less stringent restorative conditions approved by the Special Permit Granting Authority. More specifically, decommissioning shall include provision for:

- a) Physical removal of all wind turbines, Wind Monitoring or Meteorological Tower structures, equipment, security barriers and transmission lines from the site;

- b) Disposal of all solid and hazardous waste in accordance with local and state waste disposal regulations;
- c) Stabilization or re-vegetation of the site as necessary to minimize erosion. The Special Permit Granting Authority may allow the owner to leave landscaping or designated below-grade foundations in order to minimize erosion and disruption to vegetation.

2. Abandonment. Absent notice of a proposed date of decommissioning, the Community-Scale Wind Facility shall be considered abandoned when the facility fails to operate for more than one year without the written consent of the Special Permit Granting Authority. The Special Permit Granting Authority shall determine in its sole discretion what proportion of the facility is inoperable for the facility to be considered abandoned. If the applicant fails to remove the Community-Scale Wind Facility in accordance with the requirements of this section within 150 days of abandonment or the proposed date of decommissioning, the Town shall have the authority to enter the property and physically remove the facility and be indemnified for the costs and all other liabilities associated with the removal.

3. Surety. A performance bond equal to the removal cost of the proposed wind facility and restoration of the site may be required as a condition of approval, such bond to be submitted to the Zoning Enforcement Officer prior to issuance of a building permit, and held by the Town Treasurer.

616.9 Duration

A Special Permit issued for a Community-Scale Wind Facility shall be valid for the projected useful life of the facilities as determined by the Special Permit Granting Authority based on submissions of the applicant, but in any case not more than 25 years, unless extended or renewed. The time period may be extended or the permit renewed by the Special Permit Granting Authority upon satisfactory operation of the facility. Request for renewal must be submitted at least 180 days prior to the expiration date of the Special Permit. Submitting a renewal request shall allow for continued operation of the facility until the Special Permit Granting Authority acts. At the end of that period (including extensions and renewals), the Community-Scale Wind Facility shall be removed as required by this section.

616.10 Application Procedures

1. General. The application for a Community-Scale Wind Facility shall be filed in accordance with section 906 of this Bylaw and the rules and regulations of the Special Permit Granting Authority concerning Special Permits as the same maybe revised from time to time, including such revisions and requirements as may be imposed that are consistent with this section and including the items set forth below. Each application for a Special Permit shall be filed by the applicant with the Duxbury Town Clerk pursuant to Massachusetts General Laws.

2. Required Compliance Documents. The applicant shall provide the Special Permit Granting Authority with seven (7) copies of the application and all required exhibits. All plans and maps shall be prepared, stamped and signed by a professional engineer or surveyor licensed to practice in the Commonwealth of Massachusetts. Included in the application shall be:

- a) Name, address, phone number and signature of the applicant, as well as all co-applicants or property owners, if any;
- b) The name, contact information and signature of any agents representing the applicant;
- c) A textual description of the project, including the names of all contractors and control persons and consent to the publications of such description in the local newspaper;
- d) Documentation of the legal right to use the Community-Scale Wind Facility site;
- e) Detailed architectural and structural plans of the proposed Community-Scale Wind Facility including foundation plans and structural calculations;
- f) Proof of liability insurance that satisfies section 616.3.3;
- g) Certification of height approval from the FAA;
- h) A statement that satisfies section 616.6.2, listing existing and maximum projected noise levels from the Community-Scale Wind Facility.

3. Siting and Design. Unless otherwise waived by the Special Permit Granting Authority, the applicant shall provide the Special Permit Granting Authority with a description of the property which shall include:

- a) Copy of a portion of the most recent USGS Quadrangle Map, at a scale of 1:25,000, showing the proposed facility site, including turbine sites, and the area within at least two miles from the facility. Zoning district designation for the subject parcel and surrounding parcels shall be included;
- b) A one inch (1") equals forty feet (40') site plan of the proposed Community-Scale Wind Facility site, with contour intervals of no more than two feet (2'), showing the following:
 - (i) Property lines for the subject parcel and adjacent parcels within 500 feet;
 - (ii) Outline of all existing buildings, including purpose (e.g. residence, garage, etc.) on subject parcel and all adjacent parcels within 500 feet. Include distances from the Community-Scale Wind Facility to each building shown;
 - (iii) Location of all roads, public and private on the site parcel and adjacent parcels within 500 feet, and proposed roads or driveways, either temporary or permanent, including any associated drainage facilities;
 - (iv) Existing areas of tree cover, including average height of trees, on the site parcel and adjacent parcels within 500 feet;

- (v) Proposed location and design of Community-Scale Wind Facility, including all turbines, ground equipment, appurtenant structures, transmission infrastructure, access, fencing, exterior lighting, etc; and
- (vi) Location of viewpoints referenced in 616.10.4 of this section.

4. Visualizations. The Special Permit Granting Authority shall select between three (3) and six (6) sight lines, including from the nearest building with a view of the Community-Scale Wind Facility, for pre-and post-construction view representations. Sites for the view representations shall be selected from populated areas or public ways within a two (2)-mile radius of the Community-Scale Wind Facility. View representations shall have the following characteristics:

- a) View representations shall be in color and shall include actual pre-construction photographs and accurate post-construction simulations of the height and breadth of the Community-Scale Wind Facility (e.g. superimpositions of the Community-Scale Wind Facility onto photographs of existing views); and
- b) All view representations will include existing, or proposed, buildings or tree coverage.

5. Landscape Plan. The applicant shall submit a landscape plan indicating all proposed changes to the landscape of the site, including temporary or permanent roads or driveways, grading, vegetation clearing and planting, exterior lighting, screening vegetation or structures. Lighting, other than required by the FAA, shall be designed to minimize glare onto abutting properties and be directed downward with full cut-off fixtures to reduce light pollution.

6. Development, Operation and Maintenance Plan. The applicant shall submit a plan for the development of the Community-Scale Wind Facility (including the specifications for the Community-Scale Wind Facility and the development timeline and process from ground breaking to commissioning), as well as a plan for maintenance of access roads and storm water controls, and general procedures for operational maintenance of the Community-Scale Wind Facility.

7. Independent Consultants. Upon submission of an application for a Special Permit, the Special Permit Granting Authority will be authorized to hire outside consultants pursuant to Massachusetts General Laws. The applicant shall be required to pay all reasonable costs associated with the consultant reviews required by the Special Permit Granting Authority. Such costs shall be pre-paid by the applicant per the rules and regulations of the Special Permit Granting Authority.

616.11 Right of Appeal

Any person aggrieved by the decision of the Special Permit Granting Authority may take an appeal to the courts in accordance with Massachusetts General Laws.

617 This section was deleted Annual Town Meeting 2018.

618 GROUND-MOUNTED SOLAR PHOTOVOLTAIC INSTALLATIONS OVERLAY DISTRICT

618.1 Purpose and Intent

618.1.1 The purpose of this Section 618: Ground-Mounted Solar Photovoltaic Installations Overlay District (“GMSP Overlay District”) is to create a zoning overlay district that allows the installation, operation, maintenance and decommissioning of Ground-Mounted Solar Photovoltaic (GMSP) Arrays as a permitted use in such district, to provide standards for the placement, design, construction, operation, monitoring, modification, maintenance and decommissioning of such installations, to establish the process and procedures for review and approval of an installation, to address public safety, minimize impacts on scenic, natural and historic resources, and to provide adequate financial assurance for the installation, operation, maintenance and decommissioning of GMSP installations.

618.1.2 The requirements set forth in this Section 618 shall establish the set of standards that apply to the construction, operation, maintenance, and decommissioning of GMSP Installations in the GMSP Overlay District and the process and procedures for Site Plan review and approval of an application for a GMSP Installation.

618.1.3 If an Applicant does not receive GMSP Installation Site Plan Review approval or such approval lapses, then all requirements of the underlying district shall apply to the land and this alternative set of standards for the construction, operation, and/or repair of GMSP Installations shall not apply.

618.1.4 The Planning Board is the Site Plan Review Authority (SPRA) for all applications for GMSP Installations in the GMSP Overlay District defined in this article of the Bylaws.

618.1.5 An application for a GMSP Installation shall follow all Planning Board processes and procedures for a Site Plan Review as defined by these Bylaws unless either listed as an exception or modified by this article.

618.2 Applicability

618.2.1 Section 618 shall apply to proposal(s) for Site Plan Review and approval of GMSP Installations and construction of approved GMSP installations in the GMSP Overlay District after the effective date of this Section 618. This Section 618 shall also apply to physical modifications that materially alter the type, configuration, or size of these installations or related equipment over the operational life of the installation.

618.2.2 Location of GMSP Overlay District: The GMSP Overlay District shall be comprised of Town Assessors Map Portions of 155 Mayflower Street, PID 092-500-039 0 Mayflower Street, PIDs 093-400-041 and 093-500-431. The GMSP Overlay District is shown on a map entitled "Ground Mounted Solar Photovoltaic Overlay District," which map is hereby incorporated by reference in and made part of this Zoning Bylaw.

618.2.3 Areas for additional GMSP Overlay Districts may be added from time to time by vote at Town Meeting to amend this Bylaw article.

618.3 Definitions

As-of-Right Siting: As-of-Right Siting shall mean that development may proceed without the need for a special permit, variance, amendment, waiver, or other discretionary approval. As-of-Right development shall be subject to Solar Photovoltaic Installations Site Plan Review to determine conformance with the Town's Zoning Bylaw. Projects subject to Solar Photovoltaic Installation Site Plan Review that comply with the Town's Zoning Bylaw cannot be prohibited, but can be reasonably regulated by the Site Plan Review Authority.

Ground-Mounted Solar Photovoltaic (GMSP) Installation: A solar photovoltaic system that is structurally mounted on the ground and is not roof-mounted or canopy-mounted, and has a minimum nameplate capacity of 250 kW DC.

Site Plan Review Authority (SPRA): The Duxbury Planning Board is the SPRA for GMSP Installations.

Solar Photovoltaic Installation Site Plan Review: A review and approval by the Site Plan Review Authority to determine conformance with the Town's Zoning Bylaw.

Nameplate Capacity: The maximum rated output of the electric power production of the photovoltaic system in Direct Current (DC).

618.4 Compliance with Laws, Bylaws and Regulations

618.4.1 The construction, installation operation, maintenance, decommissioning and interconnection with an electricity distribution utility of GMSP Installations shall comply with all applicable local, state and federal requirements, including but not limited to all applicable electrical, construction, noise, safety, environmental and communications requirements. No GMSP Installation shall be constructed, installed or modified without first obtaining a building permit.

618.4.2 Solar Photovoltaic Installation Site Plan Review: Prior to obtaining a building permit, construction, installation or modification, GMSP Installations shall undergo Solar Photovoltaic Installation Site Plan Review by the SPRA as provided below. In accordance with Section 22(c) of the Massachusetts Green Communities Act, Solar Photovoltaic Installation Site Plan Review shall be expedited and no decision shall be rendered more than one (1) year after the date of filing of a complete application, as determined by the SPRA.

618.5 Application and Plan Requirements

618.5.1 Subject to submittal requirements detailed in the Planning Board's "Site Plan Review Application Package," a completed application for Solar Photovoltaic Installation Site Plan Review shall be filed with the SPRA. Along with receipt of an application, the SPRA may engage, at the Applicant's cost, professional and technical consultants, including legal counsel, to assist the SPRA with its review of the application, in accordance with the requirements of G.L. c.44, §53G. The SPRA may direct the Applicant to deposit funds with the SPRA for such review at the time the application is determined to be complete, and may direct the Applicant to add additional funds as needed upon notice. Failure to comply with this section shall be valid grounds for denying the application. Upon approval of the application, any excess amount attributable to the application processing by the SPRA, including any interest accrued, shall be refunded to the Applicant.

618.5.2 Site Plan Review

The Applicant shall follow the Site Plan Review policies and procedures as defined by Article 600 Section 615 of these Zoning Bylaws and the "Site Plan Review Application Packet, Planning Board of the Town of Duxbury, Massachusetts" except as may be modified by this Section 618. The SPRA has the authority to reduce or waive the application fee.

a. The following shall be specifically included in the Site Plan in addition to those required in Section 615.4:

- i. Name/Description of project
- ii. North arrow;
- iii. Location, size of any existing landscaping;
- iv. Lighting type.

b. Plans or drawings of the GMSP Installation prepared by a Registered Professional Engineer licensed in the Commonwealth of Massachusetts, showing the proposed layout of the system and any potential shading from nearby structures or vegetation.

- c. One or three line electrical diagram detailing the Ground-Mounted Solar Photovoltaic Installation, associated components, and electrical interconnection methods, with all National Electrical Code compliant disconnects and overcurrent devices.
- d. Documentation of the major system components to be used, including the photovoltaic panels, mounting system, and inverter(s).
- e. Documentation of actual or prospective access and control of the project site sufficient to allow for construction and operation of the proposed installation.
- f. An operation and maintenance plan (see also "Operation & Maintenance Plan" Section 618.7).
- g. Signature of the Applicant(s) and property owner(s), if the Applicant is not the property owner. If the Applicant is not the property owner, a statement, signed by the property owner, authorizing the Applicant to proceed is required.

618.5.3 Application Submission: The application packet must comply with Article 600 Section 615 of the Duxbury Zoning By-Law and the Duxbury Planning Board's Rules and Regulations concerning Site Plan Review.

618.6 Construction

618.6.1 The Solar Photovoltaic Installation Site Plan Review Application must detail the proposed GMSP Installation's resistance to extreme wind, temperature snow, ice, rain, and humidity conditions.

618.6.2 Glare shall be mitigated at the Applicant's expense by the placement of fencing, vegetation or other means as reasonably required by the SPRA.

618.6.3 The GMSP Installation shall be enclosed by suitable fencing, access gates and/or other barriers to prevent unauthorized access and shall contain closed circuit cameras and motion detectors for security if required by the SPRA.

618.6.4 All utilities connections to the external electricity distribution network and lighting system shall be underground. This requirement may be partially or completely waived by the SPRA if the SPRA finds that this requirement is impractical for a specific installation.

618.7 Operation & Maintenance Plan

The Applicant shall submit as part of the Solar Photovoltaic Installation Site Plan Review Application an operation and maintenance plan for the Ground-Mounted Solar

Photovoltaic Installation, which shall include measures for maintaining safe access to the installation, storm water controls, as well as general procedures for operational maintenance of the installation.

The Operation and Maintenance Plan shall include without limitation the following:

618.7.1 Plans for replacing damaged or inoperative array panels.

618.7.2 Plans for replacing panels that have deteriorated in efficiency in excess of the manufacturer's warranty.

618.7.3 Measures to ensure that the panels are kept clean including plans for snow/ice removal.

618.7.4 Measures to ensure that the structure and brackets that support the panels shall be maintained such that no major rust or corrosion is visible for the life of the installation.

618.7.5 Measures to ensure that all buildings, enclosures, fences and other facilities that are part of the installation shall be maintained in a manner that they retain the original appearance and operational function, reasonable wear and tear excluded, including but not limited to paint, shingles, siding, roofing, roadways, gates, access panels, etc.

618.8 Dimension and Density Requirements

618.8.1 Structures: GMSP Installations and all appurtenant structures shall, to the extent not otherwise covered in this Section 618, be subject to the restrictions concerning the bulk and height of structures, lot area, setbacks, open space, and building coverage requirements set forth in this Zoning Bylaw for the zoning district in which the GMSP Overlay District is located, provided that only one parking space shall be required per GMSP Installation and the GMSP Installation may cover up to 70% of any lot, provided other setback requirements are met.

618.8.2 The maximum height from grade to the top of the Ground-Mounted Solar Photovoltaic Installation shall not exceed 15 feet for each individual solar panel.

618.8.3 All appurtenant structures, including but not limited to, equipment shelters, storage facilities, transformers, and substations, shall be architecturally compatible with each other. The SPRA may require that structures be screened from view by vegetation and/or joined or clustered to avoid adverse visual impacts.

618.9 Design Standards

618.9.1 Lighting: Lighting of other parts of the installation, such as appurtenant structures, shall be limited to that required for safety and operational purposes, and shall be reasonably shielded from abutting properties. Where feasible, lighting of the Ground-Mounted Solar Photovoltaic Installation shall be directed downward and shall incorporate full cut-off fixtures to reduce light pollution.

618.9.2 Signage: Signs on Ground-Mounted Solar Photovoltaic Installations shall comply with this Zoning Bylaw. A sign that identifies the owner and/or operator and provides a 24-hour emergency contact phone number shall be required. Ground-Mounted Solar Photovoltaic Installations shall not display any advertising. Advertising does not include signs providing reasonable identification of the owner, manufacturer or operator of the installation.

618.9.3 Utility Connections: Electrical lines for utility interconnections shall be routed underground unless found to be impractical by the SPRA or otherwise required by the interconnecting utility.

618.9.4 Color: The GMSP panels, including all replacement panels, which make up the GMSP Installation, shall each have similar color, reflectivity and tone. The SPRA may in its discretion grant a case-by-case exception.

618.10 Safety and Environmental Standards

618.10.1 Emergency Services: The Ground-Mounted Solar Photovoltaic Installation owner or operator shall provide a copy of the project summary, electrical schematic and approved site plan to the Duxbury Fire Chief and Police Chief. The owner and operator shall cooperate with local public safety and emergency services in developing an emergency response plan. All means of shutting down the installation shall be clearly marked. The owner or operator shall identify a responsible person for public inquiries throughout the life of the installation. Access capability (lock keys, combinations, entry codes, etc.) shall be provided by the owner and/or operator to these public safety officials.

618.10.2 Land Clearing, Soil Erosion and Habitat Impacts: Clearing of natural vegetation shall be limited to what is necessary for the construction, operation and maintenance of the GMSP Installation or otherwise prescribed by applicable local, state and federal laws and regulations.

618.10.3 GMSP Installation on Landfill: If the GMSP Installation will be located on a landfill, it may be required to obtain a Post-Closure Use Permit from the Massachusetts Department of Environmental Protection pursuant to 310 CMR 19.143. The SPRA may

defer action on any application until such Post-Closure Use Permit is obtained or evidence is provided by the Applicant that a Post-Closure Use Permit is not required.

618.11 Monitoring and Maintenance

618.11.1 GMSP Installation Conditions: The GMSP Installation owner or operator shall maintain the facility in good condition and repair. Maintenance shall include, but not be limited to, painting, structural repairs, and integrity of security measures, buildings, roadways, access gateways, structural integrity, and elimination of rust and/or corrosion. Site access shall be maintained to a level acceptable to the Duxbury Fire Chief and other public safety officials. The Town may continue to maintain driveways and parking areas that exist at the time of the application. The owner, operator or property owner shall be responsible for the cost of maintaining the installation and any access road(s) installed by such party, unless accepted as a public way.

618.11.2 Modifications: To the extent that modifications deviate from the approved site plan, modifications to a GMSP Installation made after issuance of the required building permit shall require review by the SPRA.

618.11.3 Monitoring and Reporting: The operator or owner of the GMSP Installation shall monitor the facility for correct and efficient operation and to detect degradation, incorrect operation or other anomalies.

618.11.4 Clearing of Vegetation and Trees: The owner/operator of the GMSP Installation shall be responsible for maintaining the immediate area around the GMSP Installation by keeping vegetation, trees and any other growth trimmed for the operational life of the GMSP Installation. For the purpose of this section, trimming means:

- a. Grass or other ground vegetation no higher than two (2) feet.
- b. Trees and bushes shall be maintained to eliminate additional solar shading, to ensure safe access, to prevent damage caused by weather (wind, rain, snow, etc.) if a tree or bush is in danger of falling across an array and to present a clean and professional aesthetic appearance.

618.12 Abandonment and Decommissioning

618.12.1 Removal Requirements: Any GMSP Installation that has reached the end of its useful life or has been abandoned consistent with Section 618.12.2 "Abandonment" shall be removed by the owner or operator. The owner or operator shall physically remove the installation no more than 150 days after the date of discontinued operations. The owner or operator shall notify the SPRA by certified mail

of the proposed date of discontinued operations and plans for removal.
Decommissioning shall consist of:

- a. Unless requested otherwise by the property owner, physical removal of all structures, equipment, security barriers and transmission lines associated with the GMSP Installation from the site.
- b. Disposal of all solid and hazardous waste associated with the decommissioning of the GMSP Installation in accordance with local, state, and federal waste disposal regulations
- c. Stabilization or re-vegetation of the site of the GMSP Installation as necessary to minimize erosion. The SPRA may allow the owner or operator to leave landscaping or designated below-grade foundations and conduit in order to minimize erosion and disruption to vegetation.

618.12.2 Abandonment: Absent written notice by the owner or operator to the SPRA of a proposed date of decommissioning or written notice by the owner or operator requesting an extension due to extenuating circumstances, the GMSP Installation shall be deemed abandoned when it fails to operate or operations are discontinued for more than one (1) year without the written consent of the SPRA.

Section 619: Facilities for Marijuana Not Medically Prescribed

619.1 Intent

On November 8, 2016, the voters of the Commonwealth approved, but the Town of Duxbury did not support (56% voted in opposition), a law regulating the cultivation, processing, distribution, possession and use of marijuana for personal use (new G.L. c. 94G, Regulation of the Use and Distribution of Marijuana Not Medically Prescribed). The personal use of marijuana raises planning and public safety issues, such as, but not exclusively: a lack of specific measures to define toxic levels of marijuana use and determine impaired driving limits, which are not consistent with the purpose of the zoning bylaw, which is to protect the health, safety and general welfare of all inhabitants of the Town including the preservation of natural resources.

619.2 Definitions

“Marijuana Cultivator”, an entity licensed to cultivate, process and package marijuana, to deliver marijuana to marijuana establishments and to transfer marijuana to other marijuana establishments, but not to consumers.

“Marijuana Establishment”, a marijuana cultivator, independent testing laboratory, marijuana product manufacturer, marijuana retailer or any other type of licensed marijuana-related business.

“Marijuana Product Manufacturer”, an entity licensed to obtain, manufacture, process and package marijuana and marijuana products, to deliver marijuana and marijuana products to marijuana establishments and to transfer marijuana and marijuana products to other marijuana establishments, but not to consumers.

“Marijuana Products”, products that have been manufactured and contain marijuana or an extract from marijuana, including concentrated forms of marijuana and products composed of marijuana and other ingredients that are intended for use or consumption, including edible products, beverages, topical products, ointments, oils and tinctures.

“Marijuana retailer”, an entity licensed to purchase and deliver marijuana and marijuana products from marijuana establishments and to deliver, sell or otherwise transfer marijuana and marijuana products to marijuana establishments and to consumers.

619.3 Prohibition

Marijuana Establishments are prohibited in all zoning districts in the Town in accordance with General Laws chapter 94G, section 3.

ARTICLE 621 Solar Photovoltaic Facilities

621.1. Purpose

The purpose of this bylaw is to facilitate and appropriately regulate the creation of solar photovoltaic facilities (SPVF) by providing standards for the placement, design, construction, operation, monitoring, modification and removal of such facilities that address public safety, minimize impacts on environmental, scenic, natural and historic resources and to provide adequate financial assurance for the maintenance, repair and eventual decommissioning of such facilities.

621.2. Applicability

This Section 621 applies to all large-scale and small-scale solar photovoltaic-electric facilities and modifications of existing facilities which are located in the Residential Compatibility, Planned Development, or Neighborhood Business zoning districts; however, this Section does not apply to solar photovoltaic-electric facilities in the Ground Mounted Solar Facilities Overlay District.

In instances where restrictions specific to overlay districts are also applicable, the more restrictive regulations shall apply, unless specifically called out otherwise in this Section 621.

When a proposed ground mounted solar photovoltaic facility is located in the Wetlands Protection Overlay District and would be subject to a special permit per Section 404.10 of the Zoning By-law for such use, the Planning Board will serve as the Special Permit Granting Authority, and shall weigh the criteria in Section 404, in the consideration of any special permit as may be issued under its authority as the Special Permit Granting Authority per this Section 621.

If a proposed non-accessory ground mounted solar facility is subject to a special permit from the Planning Board for Land Clearing and Grading per Section 611 of the Zoning By-law, for such use the Planning Board shall weigh the criteria of Section 611 in the consideration of its Administrative Site Plan Review, or special permit consideration if applicable, per this Section 621.

621.3. Compliance with Applicable Laws and Regulations

The construction, operation, use, maintenance, repair, modification and removal of all SPVF shall be subject to and comply with all applicable local, state and federal statutes, rules, regulations, bylaws and requirements, including, and without limitation, all Town of Duxbury General and Zoning By-laws, including those concerning design criteria, the bulk and height of buildings and structures, lot area, setbacks, open space, parking and building coverage requirements as applicable for the zoning district, whether or not specifically stated in, and in addition to, this Section 621.

621.4. Definitions

Accessory Solar Photovoltaic Facility: Solar Photovoltaic Facility with a nameplate capacity of less than 50 kWDC (kilowatts of direct current), provided that the facility is sized so that the electricity generated by the facility as measured by the Rated Nameplate Capacity is no more than 125% of the load used by the principal use on the lot where the facility is located, and is incidental and subordinate to the principal use on the lot.

Solar Photovoltaic Facility (SPVF): shall mean and include all devices, equipment, structures and structural design features used for, as part of, or in connection with, the collection, storage, generation, and/or distribution of solar energy, and all appurtenant facilities, structures and equipment thereto.

Ground mounted SPVF: any Solar Photovoltaic Facility that is structurally mounted on the ground, is not roof mounted, or is mounted as permitted by the Planning Board.

Ground mounted Canopy SPVF: any ground mounted Solar Photovoltaic Facility that is elevated above a parking area, pool or other use incidental to the principal use on the lot as may be allowed in the zoning district.

Roof mounted SPVF: any Solar Photovoltaic Facility that is affixed to the roof of a building.

Rated Nameplate Capacity: the maximum rated output of electric power production of the photovoltaic facility in direct current (DC). Such capacity shall mean and include the aggregate capacity of all SPVF located on any lot.

621.5. Use Requirements

- a. No SPVF shall be constructed without a Building Permit.
- b. Except for off-grid systems, no building or other permit or approval for an SPVF shall be issued unless the applicant has provided satisfactory evidence that the utility company has been informed of the owner or operator's intent to install the SPVF and that the utility company has agreed to interconnect the SPVF to the electric power grid.
- c. Roof-mounted Accessory SPVF in the RC, PD and NB districts, and systems or parts of a SPVF located interior to a primary or accessory structure, shall be permitted As-of-Right provided they meet the requirements of this Section 621.
- d. All Ground mounted Accessory SPVF and Ground mounted Canopy SPVF, whether Accessory or non-accessory, in the NB districts shall require Administrative Site Plan review and approval per Section 615 of the Zoning By-law, and shall also submit with the application the information requested per Section 618.5.2 Ground Mounted Solar Photovoltaic Installations Overlay District.
- e. Ground mounted SPVF are not permitted in the RC and PD districts.
- f. Ground mounted Canopy SPVF are not permitted in the RC and PD districts.

621.6. General, Safety and Environmental Requirements

SPVF shall be subject to the following restrictions:

- a. All SPVF shall require a sign on the SPVF that identifies the owner and operator of the SPVF and provides a 24-hour emergency contact telephone number. Said sign shall not display any advertising.
- b. Roof mounted SPVF may not protrude higher than the highest point of the roofline. The Planning Board may, by special permit, authorize a protrusion of up to six feet upon a finding by the Planning Board that the requested waiver is in the public interest and is consistent with the purpose and intent of the Town of Duxbury Zoning Bylaws. No waiver shall be granted if the height of the structure measured to the highest point of the SPVF will exceed thirty five feet.
- c. All Ground mounted SPVF must be fenced in a manner consistent with Section 305 Barrier Requirements of the International Swimming Pool and Spa Code , to the satisfaction of the Building Commissioner to prevent injury;
- d. All Ground mounted SPVF shall not cast a shadow upon an abutting lot;
- e. All Ground mounted Canopy SPVF must be designed so that the bottom of the lowest horizontal structure is not lower than 8 feet in order to prevent injury.
- f. All Ground mounted SPVF and Ground mounted Canopy SPVF:

- (i). May not exceed a height of twenty feet, and must provide for stormwater treatment in accordance with the Zoning Bylaw;
 - (ii). Lighting shall be limited to that required for safety and operational purposes, and shall be reasonably shielded from abutting properties. Where feasible, lighting shall be directed downward and shall incorporate cutoff fixtures to reduce light pollution;
 - (iii). Shall use panels that each have a similar color, reflectivity and tone, including all replacement panels; however, this requirement may be waived by the Planning Board under Administrative Site Plan Review if the Planning Board finds that this requirement is impractical for a specific installation on a case-by-case basis;
 - (iv). Shall be included in any calculation of the maximum building coverage percentage requirement if applicable, as provided in this Duxbury Zoning Bylaw; and
 - (v). Shall install utilities connections to the external electricity distribution network underground; however, this requirement may be waived by the Planning Board under Administrative Site Plan Review if the Planning Board finds that this requirement is impractical for a specific installation.
- g. Where a Ground mounted SPVF abuts a residential use or public way (excluding Ground mounted Canopy SPVF), there must be increased consideration for mitigating impacts to the residential use or public way. The Planning Board may require items such as, but not limited to, increased setbacks, visual screening such as plantings, or sound buffering as part of the Administrative Site Plan Review.

621.7. Required Security

A cash security for all SPVFs in the Neighborhood Business Districts shall be required in the amount equal to 150% of the cost of site cleanup and restoration, and shall be adjusted on an annual basis to reflect the changes in the Consumer Price Index.

621.8. Monitoring, Maintenance and Reporting

- a. Owner and operator shall maintain the SPVF in good condition. Maintenance shall include, but not be limited to, painting, structural repairs, inspections, and integrity of security measures.
- b. Ground mounted SPVF access and security shall be maintained at a level acceptable to the Fire Chief and shall provide for access through a lockbox or other acceptable measure for emergency response.
- c. Annual reporting for all Ground mounted SPVF and Ground mounted Canopy SPVF shall be submitted to the Building Inspector demonstrating and certifying compliance with the Operation and Maintenance Plan, and such conditions as may be included in a special permit for such facilities. Said reporting shall include information on the maintenance completed during the year, documentation of continued liability insurance, and the amount of electricity generated by the facility. Copies of the reporting shall be submitted to the Planning Board and to any other Town permitting agencies who have issued permits for the SPVF (such as the Fire Department,

Conservation Commission, or other local town authority). All annual reporting shall be submitted within 45 days of the end of the calendar year.

d. Annual reporting for Roof mounted SPVF in the NB District shall be submitted to the Building Inspector demonstrating and certifying regular inspections as may be required, and the amount of electricity generated by the facility, on an annual basis within 45 days of the end of the calendar year.

621.9. Abandonment and Decommissioning

a. Removal Requirements

Any SPVF which has reached the end of its useful life or has been abandoned shall be removed. The owner shall be responsible for ensuring that the SPVF is physically removed within 150 days after the date of discontinued operations. The owner or operator shall notify the Building Inspector by certified mail of the proposed date of discontinued operations and plans for removal.

Decommissioning shall consist of physical removal of all components of the SPVF, including but not limited to structures (for Ground mounted SPVF), foundations (for Ground mounted SPVF), equipment, security barriers and above-ground transmission lines, as well as associated off-site utility interconnections if no longer needed.

Disposal of all solid and hazardous waste must be in accordance with local, state and federal waste disposal regulations.

Restoration of the site to its natural pre-existing condition shall be completed within thirty days after removal of the SPVF, including stabilization or re-vegetation of the site as necessary to minimize erosion.

b. Enforcement by the Town.

If the owner fails to remove a Ground mounted SPVF in the NB Districts in accordance with this Section 621, the security set forth in Section 621.7 shall be forfeited to the Town, and the Town may take further enforcement action as provided in this Zoning Bylaw, including seeking injunctive relief from the courts.

ARTICLE 700 - DESIGN STANDARDS FOR PLANNED DEVELOPMENTS

701 PURPOSE

This section of the Bylaw establishes standards for the design and review of a development application for a planned development. Guidelines are stated under which considerable design flexibility and evaluation can be exercised. Further, general municipal regulations governing the improvements on the site are identified to establish a basis upon which modifications may be substantiated.

702 UNDEVELOPABLE LAND

702.1 Classifications

Certain lands shall be classified as undevelopable as being in the Wetlands Protection Overlay District, and specifically located on the site and identified upon the Land Classification Map under Section 807.3.3. Applicants are encouraged to include the wetlands and waterbodies within the open space; however, they do not count towards the open space requirement.

702.2 Use Restrictions

The utilization of such undevelopable land shall be restricted and preserved in the manner provided as follows:

1. Common Open Space.
2. Concept and Implementation Method
Common open space shall be preserved by a method approved by the Board of Appeals (such as public donation, conservation or historical easement or restriction, covenants or deed restriction in conjunction with a trust or homeowners' or residents' association), whereby both the Town and the residents of a planned development are granted enforceable rights with respect to such preservation.
3. Maintenance Fees.
A fee structure for the preservation, improvement and maintenance of common open space shall be approved by the Town and contained in an agreement filed with the Town. The maximum and minimum fees shall be specified. Under no circumstances shall fees reflect the cost of land acquisition, improvements shown in the common open space analysis, or facilities for which public use is permitted on a regular basis.
4. Open Space Maintenance.
In the event that the organization established to own and maintain common open space shall fail to maintain it in reasonable order and condition, the Board

of Selectmen may serve written notice of such failure upon such organization or upon the residents within or owners of the planned development and shall include a demand for correction within thirty days and shall state the date, time and place of a hearing thereof which shall be held within fourteen days of the notice. If the deficiencies are not corrected or the Board's demand modified, the Town, acting through the Board of Selectmen, may enter upon the common open space and maintain the same for a period of one (1) year. Before the expiration of the year, a second public hearing shall be called by the Board at which time the organization or the residents shall show cause why such maintenance should not continue for a succeeding year. If the Board determines that the need of Town maintenance no longer exists, the Board shall cease to maintain the common open space. All costs incurred by the Town shall be assessed against the properties within the planned development and shall become a lien on those properties which may be collected and enforced in the manner fixed by law for the collection and enforcement in the manner fixed by law for the collection of taxes. Notice of lien shall be recorded in the Registry of Deeds.

702.3 Planning Requirements

Access shall be provided to undevelopable lands by means of trails or paths installed by the developer. Only land uses that are inseparable from waterfront locations and that do not diminish the present or prospective value of surface water for supply, recreation, land use policy for marshes, flood and water storage, wildlife habitat and fish spawning grounds shall occupy undevelopable lands subject to the Wetlands Protection Overlay District regulations. Land uses that do not diminish operation of the primary roles of marshes include recreation, cranberry bogs and certain other agricultural uses. Cranberry bogs along with associated ponds shall be included as natural elements in the open space system calculations. The aquifer or water-bearing stratum shall be protected and managed. All precautions shall be undertaken to accomplish these goals. Steep slopes, for reasons of erosion, are unsuitable for development and shall remain in their natural state when determined to be in the public interest by the Town. No paving shall be located on undevelopable land.

702.4 Nature Center

Nature centers requiring the establishment of permanent fixtures designed for use by the public may be installed on undevelopable land, provided this use has been indicated on the Open Space and Community Facilities Map and in the reports filed, and is consistent with the provisions of Article 400. A detailed plan of proposed improvements shall be filed indicating the manner in which the center shall be operated and funded. No paving shall be located on undevelopable land.

703 COMMUNITY CONSIDERATIONS

The following considerations shall be made in favor of the Town.

703.1 Buffer Widths

An open space buffer shall be preserved along boundaries of the site as follows:

1. Separating proposed detached single-family dwellings from a street line or land developed for residential uses at density (dwelling units/acre) twenty-five percent (25%) or more below that proposed: seventy-five (75) feet wide.
2. Separating other proposed structures or their parking areas from any use (including undevelopable land) other than common or public open space or other developments in the same category of use: one hundred and twenty-five (125) feet wide.
3. In the case of a residential or institutional structure in existence prior to March 13, 1973, on a tract of land zoned planned development district, a buffer shall be provided extending a distance of three hundred feet measured in all directions from the sides of such existing structure, except those areas in a neighborhood business district. Within this protective buffer, residential and institutional development shall be allowed as permitted in a residential compatibility district under the provisions of this Bylaw. This buffer may be reduced or waived upon the written recommendation of the Planning Board, which shall consider any unique historic, architectural, or visual qualities of that structure in determining the necessity for protection. At other locations, none are required.
4. Requirements for buffers adjacent to existing roads may be reduced, following the written recommendations of the Planning Board, if the surrounding area has been previously developed, and the existing character of the neighborhood will be retained.

703.2 Buffer Materials

1. Preferred landscaping is retained natural woodlands. Grass and mounds shall be approved buffer material provided suitable indigenous shrubs and other plant material are used for screening. Lands used for buffer may be maintained either as common open space or as private open space subject to a suitable deed restriction.
2. On sites in which insufficient land is available for a landscaped buffer of the full width required, fences may be used in conjunction with a reduced width of landscaped area, provided the fencing material selected is compatible with the vicinity.

703.3 Setbacks

Buildings shall be setback from the property line by the buffer zone plus a distance equal to the height of the building. In the neighborhoods that are presently developed, the setbacks of new buildings may be reduced to conform to front yard and rear yard

setbacks of existing buildings. Setback areas may be utilized for paving and non-structural community facilities.

703.4 Building Height

New buildings located beyond two hundred feet of existing buildings shall not exceed thirty-five (35) feet in height. New buildings located within two hundred (200) feet of existing buildings shall not exceed the roofline plane as increased by an angle of ten degrees at a point two hundred (200) feet from the lot boundary to a maximum of thirty-five (35) feet of building height. On development sites of less than ten acres, which are located in developed areas, the allowable building heights shall not exceed those shown to be typical of the neighborhood. In no case shall a planned development use type exceed thirty-fives (35) feet in height or two and one-half (2.5) stories. If any part of any floor level is more than four feet (4) above finished grade, it shall be considered as one story.

703.5 Neighborhood Access

No development site shall reduce vehicular access to an existing neighborhood. The extension of existing cul-de-sac streets to serve a planned development shall not be permitted.

703.6 Building Character

The proposed development shall be designed to retain and reflect certain characteristics of the neighborhood in which it is to be located. Design characteristics shall be stated in the development application and shall include, but not be limited to: building materials, architectural design, street furniture and site and building landscaping.

704 RESIDENTIAL BUILDINGS

704.1 Single-Family Buildings

Single-family buildings shall have individual entrances. Each dwelling unit shall have its own front and rear yard. At least one yard shall be thirty-five (35) feet in width consisting of landscaped open space. No detached building shall be closer than its height to any other building.

704.2 Semi-Detached Buildings

Semi-detached buildings shall be designed around a common party wall. The separation between exterior building walls shall be a minimum of ten (10) feet if there are no windows or the building location of the adjacent buildings is changed by a minimum of eighty degrees. All other spacing shall be at least equal to the average height of the buildings. An architectural theme shall be carried out by use of common building materials, color, exterior detailing, bulk and/or roof lines. Rigidity in design

shall be avoided by variations in building location, landscaping, planting and building coverage.

704.3 Three- and Four-Family Buildings

Three- and four-family buildings shall have a common rear yard of at least twenty (20) feet in depth. Direct access to a parking area shall be provided.

704.4 Multifamily Buildings

Multifamily buildings shall have a landscaped front yard as determined under Section 703. It is preferred that multifamily housing shall be only one dwelling unit deep or that each dwelling unit extend through the building.

704.5 Breaks In Multifamily Buildings

Attached buildings and multifamily buildings shall have breaks in both the roof line and the front and rear building walls as specified below. Breaks shall be utilized so as to minimize earth moving and removal or impacting due to cut or fill on adjacent existing vegetation.

1. Vertical Breaks

A total break footage of four vertical feet in minimum increments of eighteen inches shall be included in every one hundred and sixty horizontal building feet or within three firewalls.

2. Horizontals Breaks

A total break footage of eight (8) horizontal feet in minimum increments of three feet shall be included in every one hundred sixty (160) horizontal building feet or within three firewalls. In addition, angles in the building wall of twenty-two degrees or more shall be considered equivalent to a five-foot break. However, no building shall exceed one hundred sixty (160) feet in length. Breaks in walls shall be varied by a change in building texture provided a common architectural theme is carried out by means of consistent exterior detailing, materials and colors.

704.6 Bedroom Count

In any planned development, no dwelling unit in any building of two or more dwelling units shall be designed, constructed or altered to have more than two bedrooms. For the purpose of this provision, each room in excess of three rooms, exclusive of bathrooms, closets or other small service rooms of less than sixty-eight (68) square feet, shall be considered a bedroom. Adjacent enclosed floor areas separated by any common party partition exceeding four percent (4%) of their common dimension shall constitute separate rooms. In any cluster development, if a special permit has been granted as of July 1, 2001, the allowable number of bedrooms as defined above shall not exceed three times the number of dwelling units proposed, unless a larger number is authorized upon determination by the Board of Appeals, following recommendation by the Planning Board, that either visual overcrowding will be avoided and Town school

facilities will not be unreasonable burdened, or that the larger number of bedrooms is appropriate in order to serve an important housing need.

704.7 Residential Use Types

A minimum of three different residential uses shall be required in any special permit application for a planned development. Residential use types are defined as (1) single-family detached building, (2) single-family attached building, semi-attached building or townhouse, and (3) multifamily or garden apartments. In no case shall there be any more than seventy percent (70%) of the total number of dwelling units in any residential use type in any planned development. In Planned Development Districts 1 and 2, detached single-family dwellings shall be at least five percent (5%) of the required mix.

705 NONRESIDENTIAL BUILDINGS

705.1 Office

Office buildings shall be designed with a parking area and access to a public way separate from that provided for residential buildings. A common architectural theme shall be reflected by means of building materials, architectural style and/or color coordination. No lighting system shall create a glare on adjacent residential buildings. No manufacturing or retail sale of goods shall be permitted, except those pertinent to office operations such as news-stands or cafeteria. No building shall exceed thirty-five (35) feet or two and one-half (2.5) stories in height.

705.2 Community Facilities

Community facilities involving a building or structural coverage of thirty-five hundred (3,500) square feet or greater shall have a parking area and access to a public way separate from that provided for residential buildings. A separate pedestrian and/or bikeway access shall be provided to connect with common open space. Lighting shall be so designed that no glare extends onto residential buildings. Entrances and areas adjacent to residential buildings shall be landscaped with plantings. A common architectural theme shall be reflected by means of building materials, architectural style and/or color coordination.

706 COMMON OPEN SPACE

706.1 Land Qualities

Land credited towards meeting common open space requirements shall either be land which, because of its resource value to the Town, should be preserved in an undeveloped state, or land which has qualities making it useful to residents of the development for either passive or active recreation, and will be "developed" to serve that purpose, or land which serves an important visual role in separating the

development from existing public ways or from other existing or potential developments, or which is of value in dividing the development into coherent sub-areas.

706.2 Location

Common open space shall be located so as to serve the qualities cited immediately above, and also so that all dwellings are close to, if not abutting, common open space and residents can reach it without long distances along streets, so that pedestrian and/or bikeway access separate from the street system interconnects all significant portions of the development, so that a major portion of the common open space is in one or two large areas of substantial depth rather than being fragmented and largely linear, and so that those large areas have public visibility.

707 DESIGN RATIOS

Design ratios are intended to provide a guide for the preparation of a development application and as a means of evaluation of a development application.

707.1 Coverage Ratio

The amount of impervious coverage shall depend on the land classification and evaluation standards as specified in Article 800. Maximum coverage by density shall be defined:

Use District	Maximum Allowable Coverage/Site	Maximum Allow./Coverage Site (Residential Cluster Devel. Only if a special permit has been granted as of July 1, 2001)
Residential Compatibility	15%	10%
Planned Development 1	20%	14%
Planned Development 2	28%	17%
Planned Development 3	35%	20%

707.2 Common Open Space Ratio

The amount of common open space shall depend upon the residential category specified by Sections 708 and 807.3.3. Minimum common open space required shall be:

	Standard No. Persons Per Unit	Minimum Square Feet of Common Open Space Per Person
Single-family detached	3.5	1,000
All other single-family and	2.0	1,000

multi-family		
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In no case shall the common open space be less than twenty-five (25%) percent of the total site. The minimum common open space required herein shall be deed restricted against future structural development and shall be held in common open space uses pursuant to one of the methods of holding common open space land set forth in definitions in Section 725.

707.3 Nonresidential Parking Ratio

The amount of parking for nonresidential uses shall depend upon the type of nonresidential land use intended for the site. The Planning Board may recommend adjustments in the paved area requirements except that the areas for the required spaces must be reserved and not included in any open space calculations. In case the actual use indicates that the reserved parking spaces are needed, the developer shall be responsible to improve those areas to the same character as the exiting parking spaces. Maximum nonresidential parking space ratios shall be:

Parking Spaces per 1,000 Square Non-Residential Use	Feet of Floor Area
Office	4
Community Facility	2 per 1,000 square feet or 20 spaces, whichever is greater

707.4 Residential Parking Ratio

Minimum residential parking space ratios shall be:

Residential Use	Parking Space Per Unit
Single-family detached:	
With 4 or more bedrooms	3.0
With 2 or 3 bedrooms	2.0
Multifamily and attached:	
With 2 bedrooms	2.0
With 1 bedroom	1.5

708 USE INTENSITY AND LOCATIONAL STANDARDS

Use intensity and location standards are intended to provide a guide for the preparation of a development application and as a means of evaluation of a development application.

708.1 Use Intensity Standards

The use intensity shall be the maximum number of dwelling units permitted per gross acre excluding Wetland Protection Overlay District land. This intensity shall depend upon the residential land use category specified in Section 708. Maximum use intensity shall be:

Residential Land Use	Dwelling Units per 40,000 Sq. Feet and 60,000 Sq. Feet if in an Aquifer Protection Overlay District	Dwelling Units per 40,000 Sq. Feet and 60,000 Sq. Feet if Outside the Aquifer Protection Overlay District
Cluster Development (if a Special Permit has been Issued as of July 1, 2001)	1	1
Planned Development 1	1	1 to 2.5
Planned Development 2	1	1 to 4
Planned Development 3	1	1

708.2 Single-Family Detached Building Lot Standards

Single-family detached building lots shall be designed so that the depth shall be no less than one and one-half or more than three times the frontage at the building setback line. All lots shall have direct access only to ways classified as local streets.

708.3 Building Location Standards

Buildings shall be located substantially as indicated on the site plan as approved by the Board of Appeals. If departure is necessitated by site conditions not known at the time of approval, the building may be relocated or reoriented no more than ten feet in any direction from the location indicated on the approved site plan, in accordance with applicable dimensional requirements, following approval of the Zoning Enforcement Officer and consultation with the Design Review Board.

Building location and orientation shall reflect:

1. Relationship to the street line and to other buildings in the development if in close proximity, in order to protect privacy and create visual coherence.
2. Views, solar access, and access to open space, in order to reflect occupant's interest.
3. Organization of large developments into recognizable sub-areas in order to provide scale and identity.
4. Avoidance of topographic change and removal of native trees and vegetation, in order to protect the environment.
5. Reduction of visual intrusion into abutting premises, in order to protect existing character.

708.4 Road Location Standards

Roads shall be designed to converge traffic flows at convenient access points. Road design shall minimize traffic flows in residential areas. Gridiron arrangements shall not be allowed. To facilitate traffic flow at major intersections turning lanes shall be installed at offices and community centers and may be required at other impacted intersections. Specified construction regulations for ways are contained in Section 709.

709 WAYS

709.1 Existing Regulations

Where regulations for ways are not prescribed by this section, the requirements in the subdivision regulations of the Planning Board shall be used unless otherwise modified by the Board of Appeals.

709.2 Paved Width

The minimum width of paving for a new or improved local or feeder street shall depend on projected traffic use as interpreted by the Planning Board. Minimum width of paving shall be as follows:

Traffic Projection (ADT)*	No Park	Parallel Park One Side	Parallel Park Two Sides
Under 1,000	20 feet	26 feet	36 feet
1,000 or over	22 feet	28 feet	38 feet

*(ADT) Average Daily (24-hour) Traffic

Traffic Projection (ADT)*	45-Degree Park-One Way	90-Degree Park, One side	90-Degree Park, Two sides
Under 1,000	44 feet	42 feet	62 feet
1,000 or over	46 feet	44 feet	64 feet

*(ADT) Average Daily (24-hour) Traffic

709.3 Right-of-Way Width

The minimum width of a right-of-way for a new local or feeder street shall depend on the paved width and road classification. Minimum widths shall be as follows:

Paved Width	Local Street	Feeder Street	Parkway
Under 26 feet	40 feet	50 feet	100 feet
26 feet or greater	50 feet	60 feet	120 feet

709.4 Grades

The maximum grade for a new local or feeder street shall depend on the road classification. Maximum grades shall be as follows:

Local Street – 12% Feeder Street - 6%

709.5 Sight Distance

The minimum sight distance for a new or improved local or feeder street shall depend on the design maximum speed. Minimum sight distances shall be based on the standards established by the American Association of State Highway Officials (AASHO) or seven times the design speed whichever is greater.

709.6 Cul-de-Sac Length

The maximum length of a cul-de-sac street shall not exceed five hundred (500) feet, subject to the discretion of the Planning Board under unusual conditions.

709.7 Cul-de-Sac Turnaround

The minimum outside radius of a cul-de-sac turnaround shall depend on whether parking is provided. Minimum radii shall be as follows:

	Paved With Radius	Right-of-Way Radius
With parking	65 feet	75 feet
Without parking	50 feet	60 feet

The interior portion of a turnaround may be left unpaved and improved as a landscaped area.

709.8 Construction

All ways shall be constructed according to the requirements in the subdivision regulations of the Planning Board or as otherwise modified by the Board of Appeals.

710 INTERSECTIONS

710.1 Existing Regulations

The Planning Board subdivision regulations or as otherwise modified by the Board of Appeals shall apply to development applications submitted under this Bylaw except for intersections between local and/or feeder streets. Regulations for these streets shall be as prescribed in this section.

710.2 Clear-Sight Triangles

Clear-sight triangles shall be provided at all street intersections. Within such triangles, no vision-obstructing object shall be permitted which exceeds a height of thirty inches above or projects below ten feet above the elevation of the intersecting streets. The required dimensions of the sides of the clear-sight triangle shall depend on the maximum design traffic approach speed and the movement restrictions and shall be as follows or as established by the AASHO, whichever is greater:

Classification	Controlled Intersection	Uncontrolled Intersection
45 mph*	135 feet	200 feet
35 mph	105 feet	150 feet
25 mph	75 feet	110 feet

*mph = miles per hour

710.3 Grades

Intersections shall be approached on all sides by a straight leveling area of at least fifty feet from the nearest intersection right-of-way line, the maximum grade shall be determined by the design traffic approach speed, subject to the discretion of the Board of Appeals under unusual conditions. The maximum grades shall be five percent (5%) or as established by the AASHO, whichever is greater.

710.4 Separation

Intersections shall be separated from other road intersections on the same or opposite side by a minimum distance which shall be determined by the maximum design traffic approach speed and the type of intersection. Minimum distances shall be as follows and maximum speed classification at a mixed speed intersection shall govern:

Classification	Full or "T" Intersection
45 mph	400 feet
35 mps	300 feet
25 mps	150 feet

710.5 Angle of Intersection

Both feeder and local streets shall intersect at an angle not to exceed one hundred (100) degrees not less than eighty (80) degrees.

710.6 Arcs

Street intersections shall be rounded by tangent arcs with a minimum radius determined by the road classification. Radii depend on traffic speed and road width. In

any event design radii shall permit the largest fire vehicle to negotiate any intersection freely with a car stopped in the opposite lane. Minimum radii shall be as follows:

Classification	Radii
Local and local	25 feet
Local and feeder	35 feet
Feeder and feeder	45 feet

711 UTILITIES

All utilities shall be placed underground. Common trenches shall be utilized where practical. The minimum easement width shall be ten feet and shall be within the street right-of-way lines. Care shall be taken to avoid excessive clearing and to maintain control of grading.

711.1 Building Setback

Buildings shall be set back twenty feet from all utility easements except those providing direct service. Setbacks from natural gas transmission lines shall be fifty (50) feet.

711.2 Construction

All utilities shall be constructed according to the applicable requirements of the department or board charged with their maintenance.

711.3 Sanitary Sewage

The regulations of the Board of Health and, where other applicable, the State Sanitary Code, Title 5, shall apply to all on-site disposal systems. The Board of Appeals, or the Board of Health, may impose additional requirements to protect the Town's water resources and wetlands.

711.4 Other Utilities

The construction regulations of the public utilities or governmental agencies charged with the maintenance of the utility to be provided shall be applicable.

711.5 As-Built Drawing

As-Built drawings showing the location of utility easements shall be required upon completion of the development for submission to the appropriate Town department or board.

712 STORM DRAINAGE

712.1 Use of Existing Facilities

Existing storm sewers maintained by the Town shall be utilized in those instances where they are reasonably accessible and have available capacity. New facilities interconnecting with existing ones shall be constructed according to the requirements of the Town and in conformity to the Master Drainage Plan as interpreted by the Department of Public Works Director.

712.2 Natural Systems

The use of existing natural drainage systems shall be employed providing that the discharge into adjacent properties at the point of discharge shall not be increased nor create measurable damage. To facilitate the retention of stormwater, to protect against siltation and to prevent measurable damage, on-site improvements such as retention basins, diversion ditches, sodded swales or rubble swales may be required by the Board of Appeals under Section 807.4.5.

712.3 Streets

All streets shall be designed to provide for the discharge of surface water from the paved areas and shoulders. Provisions to accommodate stormwater runoff shall be designed to meet the needs of the site. Swales shall be constructed to meet the requirements of the Town as interpreted by the Department of Public Works Director. Sodded swales may be substituted for curbs provided a gravel base is extended to prevent pavement deterioration, on-street parking is prohibited and scouring velocity will not be reached.

712.4 Erosion Controls

Proposed methods of controlling erosion during construction shall be incorporated into the appropriate documentation submitted with the development application. This may include temporary improvements such as the use of grass or ground cover or impounding basins for erosion control both during and after construction.

713 RIGHT-OF-WAY IMPROVEMENTS

713.1 Curbs

Curbs or berms, if provided, shall be installed along both sides of ways. Construction shall meet the requirements in the subdivision regulation of the Planning Board or as otherwise modified by the Board of Appeals.

713.2 Bikeways and Walkways

A pedestrian access system shall be provided along side streets as shown under Section 807.3.5 or preferably in common open space under Section 807.3.7. Walkways shall be constructed in accordance with the specifications in the subdivision regulations of the Planning Board or as otherwise modified by the Board of Appeals and shall be at least four (4) feet in width. Bikeways shall be at least ten (10) feet in width; land and improved trails shall be at least five (5) feet in width. Pedestrian access shall be provided to all community facilities and recreation areas. All bikeways and walkways shall be separated from a way by a minimum ten (10) feet.

713.3 Fire Hydrants

Fire hydrants shall be installed within five hundred feet (500') of all proposed buildings at locations determined by the Fire Department and installed in a manner approved by the Duxbury Water Department. Locations shall be specified in the utilities map as described in Section 807.3.6.

In areas where no municipal water supply is available, a municipal water supply shall be provided by the developer.

713.4 Street Lights

Street lights shall be installed at appropriate locations in an approved manner as specified on the road and parking map as described in Section 807.3.5. Lighting fixtures shall be approved by the Board of Appeals and the electric utility company. Care shall be taken to insure uniform illumination, to avoid glare and to respect the quality of the Town.

713.5 Shade Trees

Shade trees shall be planted at appropriate locations along all ways when required so that the number shall not be less than one (1) tree for each forty (40) feet of road edge. Locations shall be specified on the road and parking map as described in Section 807.3.5. Required planting may be reduced where existing trees are fully protected and retained.

714 IDENTIFICATION

714.1 Concept

The regulations of this section shall apply to identification signs for the development. Other Town regulations shall remain in force for other sign locations within the development.

714.2 Entrance Signs

An approved sign or symbol may be permanently affixed at all entrances to the development. Such signs or symbols may be attached to a building or may be freestanding. No sign or symbol shall exceed twenty-five (25) square feet per face and shall be in a character respecting the quality of the Town.

714.3 Street Names and Housing Numbers

Street names shall not conflict or be mistaken for existing street names in the Town unless a new street is a logical extension of an existing street. The numbering system shall be in accordance with the General Bylaws of the Town. Proposed street names shall be referred to the Town Historian for comment and recommendation.

714.4 Other Identification

Any development may utilize special symbols particularly related to the development on street posts, lights and approved traffic signs. Logos and other symbols must be approved by the Board of Appeals.

715 GRADING

715.1 Drainage

All land adjacent to buildings or paved areas shall be graded to secure proper drainage away from the improvement and to prevent the undesirable collection of stormwater near buildings. Free movement shall not be impaired.

715.2 Excavation

No excavation shall be made with a cut face steeper than the natural angle of repose for the material of the area unless a structurally sound and properly engineered wall is provided to support the face of the excavation.

715.3 Fill

No fill shall be deposited which creates any exposed surface steeper than a two on one slope unless a structurally sound and properly engineered wall is provided to support the face of the fill. Fill shall be placed in even lifts of six inches to twelve inches for stability and compacted to within ninety-five percent (95%) of its maximum density, optimum moisture content.

Top soil shall not be used except as top dressing. Vegetative materials and/or refuse may be used to create mounds or other improvements above natural grade provided they are intermixed with clean sub-soil and covered with a minimum of twelve inches of top soil. Fill shall not be spread over existing natural vegetation. Trees shall be protected with an adequate tree well as required.

716 PARKING

716.1 Spaces

No off-street parking space shall have a stall depth of less than twenty (20) feet nor a width of less than nine and one-half (9.5) feet. Parallel parking shall have a minimum depth (length) of twenty-two (22) feet. All spaces shall have a minimum of one hundred ninety (190) square feet.

716.2 Setbacks

All off-street parking areas shall be separated from vehicular paved areas by a minimum landscaped setback of two (2) feet.

716.3 Stops

All off-street parking spaces adjacent to an open area shall be provided with a parking stop or bollard. No vehicle shall overhang an open area.

716.4 Planting

A minimum of twenty percent (20%) of the interior of a parking area shall be maintained as open space with indigenous plantings or by the retention of existing trees. All planting shall be protected with curbs, bumpers, or bollards as shown in the road and parking map.

716.5 Location

The required parking spaces under Section 707.3 and 707.4 shall be located within a radius of a building entrance depending on the use as follows:

Classification	Parking Radius
Residential	150 feet
Office	300 feet

717 DRIVEWAYS

717.1 Common Driveways

No more than two single-family units shall be served by a common driveway.

718 INCLUSIONARY HOUSING REQUIREMENTS

The provisions of Section 560 of the Zoning Bylaw shall, so far as applicable, apply to Planned Developments.

725 DEFINITIONS

In this Bylaw, the following terms shall have the following meaning in relation to planned developments permitted under Article 700 and Article 800. Words used in the singular include the plural and words used in the plural include the singular. Words used in the present include the future.

Buffer

An open space, landscape strip, earth mounds or natural woodlands utilized to separate uses or to separate planned developments site from all boundary uses.

Building, Attached

A dwelling unit connected on both sides to an adjacent unit by a common or party wall with a separate exterior entrance for each unit.

Building, Detached

A dwelling unit which stands alone and has not party walls or walls in common with an adjacent building except for a garage or other appropriate accessory attachment.

Building, Multifamily

Three or more dwelling units within a building with a unit contained on one floor and with units sharing an exterior door.

Building, Semi-Detached

A dwelling unit connected on one side to an adjacent unit by a common or party wall with a separate exterior entrance for each unit.

Coverage Ratio

The maximum proportion of impervious ground coverage permitted in a planned development, inclusive of all buildings and pavement, determined by design ratios set forth in Article 700.

Developer

The person, persons, corporation, trust, firm or partnership or other legal entity who shall be responsible for the development of land and/or structures or is charged with the execution of a planned development under this Bylaw.

Development Schedule

A schedule of the rate of construction of housing, business units and improvements required under a special permit granted for a development application.

Home Owners' or Residents' Association

A legal organization approved by this Bylaw composed of all resident owners in a planned development responsible for owning or maintaining common property,

providing for compulsory membership for each resident, equitable voting rights and effective participation opportunities.

Impervious Coverage

Referring to the condition in which portions of a lot are rendered impervious by structures which cover previously natural or undeveloped land area, therefore, potentially altering natural drainage and groundwater recharge characteristics.

Nonresidential Uses

Uses other than residential intended to be utilized in conformance with an approved planned development application.

Open Space

Land area which is not covered by any building or other impervious structure.

Open Space, Common

A restricted parcel or parcels of land or an area of water, or a combination of land and water within a site, designed and intended for the common use and enjoyment of the residents of a planned development, exclusive of rear, side and front yards, and owned or controlled by the residents or an organization controlled thereby, the Town or other public agency or charitable organization.

Open Space Ratio, Common

The minimum number of square feet of open space required per resident in a planned development.

Parking Perimeter Radius

The maximum distance from a principal entrance in which the required number of parking spaces shall be located.

Planned Development

A plan under this Bylaw for a number of dwelling units and accessory uses which is prepared in conformance with preliminary qualification and site analysis requirements and processed as a development application through the special permit procedure administered by the Board of Appeals.

Preliminary Qualifications

The determination of the suitability of a site, landowner, developer, and conditions for the submission of a development application for a planned development.

Site

A land area submitted for planned development.

Site Analysis

The determination of the use intensity, restricted development areas, public improvements and protected areas for a planned development.

Town

Town of Duxbury

Use Intensity

The maximum number of housing, business units per acre overall or that portion of a site allocated for that purpose.

Use Restriction

A qualification placed upon any or all parts of a site which shall define the uses permitted on the land.

Way

Any public way or private way shown in a plan approved under the provisions of the Subdivision Control Law or any way in existence when the provisions of said Subdivision Control Law became effective in the Town, having in the opinion of the Planning Board suitable width, suitable grades and adequate construction to provide for the needs of vehicular traffic in relation to the purposed use of land abutting thereon or served thereby and for the installation of municipal services to serve such land for the buildings erected or to be erected thereon.

Yard

The minimum width of open space required adjacent to a building.

ARTICLE 800 - PROCEDURES AND REGULATIONS FOR PLANNED DEVELOPMENT

801 GENERAL

No Planned Development shall be undertaken without a Special Permit granted by the Board of Appeals as provided for in Section 906.2 and in accordance with the standards, procedures and requirements enumerated in this Bylaw.

Actions undertaken by a developer under the Planned Development sections of this Bylaw shall be interpreted as voluntary with the understanding that applicable zoning regulations would have remained in effect had not the developer elected to pursue the terms of the applicable sections of this Bylaw. Acceptance of gifts, grants or bequests by the Town from public or private sources under this Bylaw shall be interpreted as within the rights of the Town under applicable Massachusetts law and shall not be interpreted as requiring certain considerations in return.

802 INFORMATION TO BE MAINTAINED BY THE TOWN

To assist in the preparation and review of such developments, the Town will maintain and provide access to certain information and data identified in this section.

802.1 Graphic

- i. Map(s) showing the conservation areas of the Town defining the wetlands and public lands.
- ii. Map(s) showing the slopes, hydrologic soil groups, and vegetation/cover including definition of prime timber stands (coniferous or deciduous)
- iii. Map(s) showing an analysis of prime areas of visual impact.
- iv. Map(s) showing the Town water system including individual pipes by size and location, source of water and storage facilities.
- v. Map(s) showing the traffic circulation patterns, including road classification, peak hour (AM and PM) traffic and accident data to nearest two (2) year period.
- vi. Map(s) showing the existing land use including all historic sites to nearest two (2) year period.
- vii. Map(s) showing Town zoning and describing the Comprehensive Plan.

802.2 Report

1. Projected occupancy by number of persons by type of dwelling unit.
2. Projected school age children based on present generation by type of dwelling unit.
3. Projected peak hours of vehicular traffic generated by type of dwelling unit.
4. Projected septic output by type of dwelling unit (gal/day/unit).

5. Projected water demand by type of dwelling unit (gal/day/unit).
6. Required number of parking spaces by type of dwelling unit.
7. Present capacity of the school system, the capital and operating costs per student to provide educational facilities and programs, the portion of the operating income generated by real estate taxes and the current number of children presently attending schools.
8. Current assessed valuation of all property in the Town, the current tax rate, the tax levy by types of land use and the total number of residents.

803 PROCEDURES FOR THE PRELIMINARY QUALIFICATION AND SITE ANALYSIS

803.1 Notification

An applicant for a Special Permit to undertake a Planned Development shall notify the Zoning Enforcement Officer of his intent. The Zoning Enforcement Officer shall notify the Board of Appeals of such intent within ten (10) days.

803.2 Information to be Submitted

In order for the Board of Appeals to establish the appropriateness of the applicant's proposal for a special permit, the applicant shall submit the information required in Section 804, Preliminary Qualification, and Section 805, Site Analysis, to the Board of Appeals. A partial submission will not be accepted.

803.3 Review by the Planning Board

The Board of Appeals shall forward the submitted information to the Planning Board to conduct a review of the proposal.

803.4 Distribution Data

The Planning Board shall, at a regularly scheduled meeting, notify the applicant as to the completeness of this data submission. When the information is considered complete, the Planning Board shall distribute to other town committees and boards such appropriate data as deemed necessary for their reviews and reports to the Board.

803.5 Report of the Planning Board

The Planning Board shall schedule meetings, at least two (2) of which shall be with the applicant, to review the submitted data. A report with recommendations shall be made not later than one hundred twenty (120) days from the meeting of the Planning Board at which the submission is determined to be complete. The report to the Board of Appeals shall be in written form and shall identify any specific and general standards in this Bylaw not fully complied with. The report shall include findings related to the Preliminary Qualification of the site, its eligibility, its consistency with the Town's goals and the standards herein, the suitability of the developer and the initial suitability of the

proposed development for a Development Application. The report shall also include a Site Analysis and findings on the allowable use intensity range; the classification of the land; the capacity of the site to accommodate streets, sanitary sewage or waste disposal systems, public water supply, stormwater drainage and other natural and/or municipal service systems. A preliminary schedule of improvements, both off-site and on-site, required by the development shall be a part of the report. Copies of the report with its findings and recommendations shall be made available to the applicant and filed in the Office of the Town Clerk.

Upon receipt of the Planning Board's report, the Board of Appeals shall place said report on file pending receipt of a Development Application for the site under the provisions of this Bylaw. The applicant shall have one hundred eighty (180) days to proceed with the filing of a Development Application using the preliminary qualification and site analysis submission and the report of the Planning Board. The applicant is encouraged to meet at least twice with the Planning Board during this period.

803.7 Development Application Requirements for Small Developments

Provided that a special permit has been granted as of July 1, 2001 and limited only for applications of a residential cluster of development of twenty (20) acres or less, or twenty (20) dwelling units or less, on a planned development in a PD-1 or PD-2 District with twenty-five (25) or less dwelling units and no Neighborhood Business uses, the Board of Appeals may accept only those requirements pertinent to the application based on the scope of that application, the size of the proposed project and the limited community impact due to that size. This section is designed for the small landowner in a confined location. In no instance shall this provision be applied to Development Applications for small areas under the same ownership that can be combined into a larger parcel or for small parts of a larger parcel subdivided on a section by section basis. All design standards in Article 700 and all administrative procedures of Articles 800 and 900 shall still apply.

804 PRELIMINARY QUALIFICATION

804.1 Time of Submission

The applicant shall submit a Preliminary Qualification, and shall prepare and submit to the Board of Appeals the following information, which is designed to provide a basis for an initial review concerning the property, developer and ownership requirements, at least ten (10) days before a regularly scheduled meeting.

804.2 Submission Standards

Information shall be submitted in a spiral bound or three-ring, loose-leaf report on 8-1/2" x 11" paper, vertical format. The scale of maps for sites less than fifty (50) acres

shall be at least one (1) inch to one hundred (100) feet; for sites larger than fifty (50) acres the scale shall be at least one (1) inch to two hundred (200) feet.

804.3 Site Information

The information shall include: location, zoning classification, size, natural characteristics, utilization of land adjacent thereto, and the existing buildings on the site.

804.4 Existing Buildings and Adjacent Uses

If the retention of existing buildings or the extension of facilities or utilities which now serve adjacent uses is contemplated, these facts shall be further documented.

804.5 Developer Information

The information shall include:

1. Ownership – The applicant shall have a property interest in the site which shall consist of a fee simple title, or an option to acquire a fee simple title within a specified time period, or a leasehold interest in excess of thirty (30) years, or a substantial interest in a joint venture agreement, real estate investment trust or other real estate syndication which has or can obtain a fee simple title, or a marketable title subject to certain restraints which will not substantially restrict its development within a reasonable time or shall show a copy of a purchase and sales agreement.
2. Existing Mortgages, Liens and Judgments – All mortgages including purchase money mortgages, all easements restricting land use, all liens, all judgments which affect the site and a proposed method of notifying, where necessary, all affected parties of the intention to submit a development application for a Planned Development shall be identified.

804.6 Development Information

The information shall include:

1. Existing and proposed non-residential land uses by types in acres.
2. Preliminary information as to the type of construction proposed and the projected mix of housing by number, type and size of dwelling units, general layouts with dimensions and numbers of rooms in each, and any unusual procedures by which conformance to building and housing codes may be determined.
3. Projected construction schedule to include the number of dwelling units and business units to be constructed and the duration of the building time, said schedule to be in accordance with any existing development estimate based upon projected demand and service capabilities and accepted by the Board of Appeals to guide development growth.

4. The roads and utility lines to connect into the proposed development providing all public and private streets and utilities have the existing capacity to absorb the amount of development which is projected.
5. The projected impact of the development on the roads, utility lines and other service systems both on-site and off-site.

805 SITE ANALYSIS

805.1 Time and Form of Submission

The applicant shall prepare and submit the following information concerning the proposed development site at the same time and in the same form as the Preliminary Qualification information.

805.2 Submission Requirements

The information shall include:

1. A topographical map of the site with contours at a minimum of ten (10) foot intervals.
2. A soils map based on data maintained by the Town.
3. A vegetation and special features map showing all woodlands and significant individual or group tree masses, rock outcroppings, existing building, roads and trails, flowing streams, drainage ways and ponds.
4. A map of the neighborhood showing the site in relationship to the surrounding areas, all proposed points on interconnecting access to existing roads, storm sewer interceptors, and public water lines, and access to local schools.
5. A report providing information about the present use and design capacities of existing roads and other service systems at the points of intersection or use, including twenty-four (24) hour average daily traffic counts or peak hour traffic counts, calculations of existing stormwater runoffs for a fifteen (15) and one hundred (100) year frequency storm and estimates of the present available water pressures, type of sewage disposal system and the calculations of impact of said water pressures and the disposal system on the site and neighborhood.
6. A sketch plan showing the general location, type and number of units in residential structures, the general location and types of non-residential structures, the general location and size of common open space, and the location and width of ways.

806 PROCEDURES FOR A DEVELOPMENT APPLICATION

806.1 Development Application Submission

An applicant for a Special Permit to undertake a Planned Development shall, ten (10) days prior to a regularly scheduled meeting, submit to the Board of Appeals a Development Application which would include all information required by this Bylaw. A partial submission will not be accepted.

806.2 Planning Board Review

The Board of Appeals shall, upon receipt of the submission, forward it to the Planning Board who, with other appropriate bodies of the Town, shall review the Development Application and the accompanying documentation. The Planning Board shall schedule at least two (2) meetings with the applicant during the review period. Within thirty-five (35) days of its receipt by the Board of Appeals, the Planning Board shall submit a report of its findings to the Board of Appeals. Said findings shall be prepared from an evaluation based on the zoning classification and the natural characteristics of the site, the impacts of the required municipal services for the site and the general and specific requirements of this Bylaw. The evaluation shall also determine the capacity of the site in relationship to the following types of services available and to be supplied. The purpose of the evaluation at any stage in the preparation of a Development Application is to determine the individual and overall impacts of the proposed Application on the capacity of the existing systems within the Town, which will serve the site and on the capacity of the site to accept the proposed development.

Road Capacity – The findings shall specify the allowable maximum use intensity based on the capacities of the ways serving the site. The closest major intersection of the public ways to be used by the development shall be evaluated to determine:

1. present traffic usage;
2. projected traffic usage;
3. effective design capacity;
4. improvements proposed to increase capacity;
5. redesign capacity; and
6. other non-intersection problems affecting road capacity. An estimated cost of the proposed improvements shall be included.

Septic Disposal Capacity – The findings shall specify the allowable maximum use intensity based on the capacity of the site to meet adequate disposal standards in this Bylaw including the requirements of Title 5 of the State Sanitary Code. Further, the findings shall be related to the natural characteristics of the site, the neighborhood soils and the underlying geology which would receive the effluent from the sewage disposal facility. This finding shall give special attention to major aquifers and to recharge and storage areas which would be affected by the effluent.

Public Water Capacity – The findings shall specify the allowable maximum use intensity based on the capacity of the public water system available to and serving the site. All existing waterlines shall be evaluated at the point of intersection to determine:

1. present line size;
2. estimated peak hour capacity;
3. present peak hour utilization; and
4. other problems affecting water capacity.

In the event that the site is located in such a manner as to provide connections to more than one (1) water line, the required data shall be determined for each. Any necessary redesign of the capacity of the public water facilities and an estimated cost of the required improvements shall be included.

Stormwater Drainage Capacity – The findings shall specify the allowable maximum use intensity of the site based on the capacity of the site to handle stormwater runoff. All existing facilities to accommodate the flow of stormwater shall be evaluated at the point of proposed discharge to determine:

1. Present line size on storm channel;
2. Estimated capacity at flood or back-up stage;
3. Alternative drainage possibilities; and
4. Improvements to increase capacity.

All calculations required to determine the capacity of existing and proposed systems shall be prepared for both a fifteen (15) and one hundred (100) year frequency storm. In the event that the site is located in such a manner as to provide connections to more than one drainage basin, the required data shall be determined for each. The findings shall also include an estimate of the potential effect of the site design upon the surface runoff and groundwater recharge of the major aquifers in the vicinity of the site, an analysis of the impact of the proposal upon existing flood plain and wetland areas and estimates of any potential increase in the flooding of these areas. Any necessary redesign of the capacity of the drainage facilities and an estimated cost of required improvements shall be included.

Further, said findings shall include detailed statements on the subject matter of Section 803.5 and shall, in addition, respond to the:

1. Relationship to and compliance with the Town's Comprehensive Plan statements and map.
2. Adequacy of the provisions for open space.
3. Adequacy of the considerations given to the existing natural systems including but not limited to:
 - a. Steep slopes;
 - b. Field areas;
 - c. Wetlands and floodplains;
 - d. Aquifer recharge areas;
 - e. Significant physiographic features;
 - f. Visual corridors;
 - g. Existing water bodies; and
 - h. Areas of high pollutability.
4. Adequacy of the provisions for public services including but not limited to:
 - a. Water supply and capacity; including available and acquired fire code requirements;
 - b. Traffic hazards and road capacity;

- c. Schools; and
- d. Fire and police.
5. Adequacy of the relationship with the surrounding neighborhoods.
6. Adequacy of the improvement and development schedules.

The report with its findings and a recommendation to approve, disapprove or approve with conditions shall be formally submitted at the public hearing on the Development Application.

806.3 Use Intensity Ranges

The permissible density of any site is to be based on the Town's Comprehensive Plan and is determined by its land classification, the maximum use intensity standards in Section 708.1, and the findings and service capacities established in Section 806.2.

807 DEVELOPMENT APPLICATION

The applicant shall prepare and submit a Development Application, including the following information, in the form and in the manner prescribed in this section and in regulations adopted by the Board of Appeals.

807.1 Inclusions

All Preliminary Qualification and Site Analysis documentation shall be included with the Development Application. Any report, findings and/or recommendation from the review of this documentation may also be included.

807.2 Submission Standards

Information shall be submitted in a spiral bound or three ring loose leaf report on 8-1/2" x 11" paper, vertical format. The scale of maps for sites in excess of fifty (50) acres shall be at least one (1) inch to two hundred (200) feet. Maps for sites of less than fifty (50) acres shall be at least one (1) inch to one hundred (100) feet. The number of maps and reports to be submitted shall be specified by the Planning Board in the Preliminary Qualification and Site Analysis stage but shall not exceed twenty-five (25). All maps shall be reduced to 17" x 22" for inclusion in the report and shall be accompanied by a written report fully discussing the map in addition to the applicable reports under Section 807.4.

807.3 Graphic Submissions

1. Regional Location Map – The site shall be identified showing its interrelationship to the community on a regional map at a scale of one (1) inch to eight hundred (800) feet. The name and location and the distance in road miles to the following facilities servicing the site shall be shown:

- Elementary school(s)
- Secondary School(s)

- Fire Station
- Police Station
- Arterial and limited access highways
- Recreation areas
- Shopping areas
- Industrial areas
- Churches and public buildings
- Public transportation routes and major stations

2. Adjacent Property Owner Map – The names of all property owners from the most recent tax list within five hundred (500) feet of the development site shall be shown on an appropriate property line map.

3. Land Classification Map – All lands within the site shall be illustrated by the appropriate category as determined by Section 702.1. The acreage and corresponding proportion of the total site represented by each category shall be stated in the map legend.

4. Land Evaluation Map – The natural limitations of the land on its use and development shall be summarized and shall include the following analysis as related to the Development Application proposals;

- a) Slopes – building and way location and drainage system;
- b) Vegetation and special features – integration into the Application;
- c) Soil quality – relation to the utilities to be provided and building precautions; and
- d) Water table – relation to primary and secondary aquifers and septic tank disposal and drainage systems.

Each of the natural limitation categories affecting site use and development shall be discussed showing how these factors were incorporated into the Development Application. Where public funds for housing are to be used, an A-95 Environmental Impact Study shall be filed. Information not appropriately included on the Map shall be in the Report required by Section 807.4.1.

5. Road and Parking Map – All roads and parking areas shall be identified on a map. The following information pertaining to ways and driveways shall be shown:

- a) Rights-of-way widths for ways;
- b) Street widths for all ways for motor vehicle use;
- c) Typical road construction showing base and sub-base and clear sight triangle dimensions for all major intersections;
- d) Finished grade profiles (centerline) including elevations of high and low points for all ways;
- e) Location of paved paths or bikeways;
- f) Location and definition of trash removal system;

- g) Location and definition of office and community facilities delivery areas and systems;
- h) Identification by function of limited access highways, distribution loops, feeder streets and local streets; and
- i) Street cross-section on the map for each category and in the report including a typical cul-de-sac turnaround and divided roadway and major street intersections involving turning lanes or rotary traffic flow.

The following information pertaining to parking locations shall be shown:

- a) Paved areas for all parking locations;
- b) Landscaped areas contained within parking locations;
- c) Estimates for the number of residential units or gross traffic flow and the number of parking spaces for each location; and
- d) Cross-section on the map showing dimensions for a typical parking space and access road(s) and indicating type of parking stop, bollard or curb to be installed.

6. Utilities Map – The following information pertaining to utilities shall be shown:

- a) Location of individual sewage disposal systems;
- b) Location of all common sewage treatment facilities;
- c) Location of major water distribution facilities and fire hydrants;
- d) Location of all existing and proposed pipelines and transmission lines showing easements;
- e) Location of any form of water treatment or distributing facility other than lines and fire hydrants;
- f) Cross-section of a typical common service trench showing easements and dimensions and the placement of each utility; and
- g) General distribution systems for gas, electric, telephone and cable TV as applicable.

7. Open Space and Community Facilities Map – The following information shall be shown:

- a) All land dedicated or deed restricted for public or common use showing major trails, area acreage and proposed use;
- b) Location of all playfields, tot-lots, or other recreational facility indicating type and general area of concentrated use;
- c) Location of all buildings intended for community, school, religious or institutional use indicating approximate building coverage in square feet;
- d) Location of all existing buildings, historical areas and scenic areas to be preserved; and
- e) Listing on the map the number, by type, of the following community facilities or other optional facilities:
 - Ball fields (baseball, football, soccer)
 - Basketball and tennis courts

- Park, pavilion and shelters
- Picnic grounds
- Ponds and lakes
- Swimming and wading pools, and
- Tot-lots.

8. Land Coverage and Drainage Map – The following information shall be shown:
- a) All areas of the site to be covered by paving and/or building shall be identified with the amount of area in square feet; and the proportion of each as related to the total site shall be indicated on the map and shown by watershed as existing on and off-site prior to proposed development.
 - b) All areas of the site in which the natural vegetative cover will be altered shall be identified and the proportion by type of change with the amount of area in acres and the proportion of each as related to the total site shall be indicated on the map.
 - c) All drainage areas which occupy five (5) percent or more of the site shall be identified with the amount of area in acres and the proportion of each as related to the total site shall be indicated on the map.
 - d) All natural drainage swales and all streams and their off-site watershed shall be identified with the maximum area shown to be covered by water resulting from a rainfall of fifteen (15) and one hundred (100) year frequency storms.
 - e) All improvements including retention basins, ponds, culverts, dams and storm water pipes in excess of six (6) inches shall be located on the map by type.
9. Land Use Map – The following information shall be shown:
- a) Number and location of single family detached units;
 - b) Number and location of single family semi-detached or attached units;
 - c) Number and location of multi-family units by type;
 - d) Location of office buildings; and
 - e) Location of community facilities.
10. Dwelling and Other Buildings and Structures – The following information shall be shown:
- a) General Layout of each type of dwelling unit showing building dimensions and rooms and general layout of non-residential buildings and structures showing dimensions and uses.
 - b) Building elevations and/or renderings to graphically illustrate the architectural design and character of the proposed dwelling or non-residential building or structure. The elevations shall be drawn to an appropriate architectural scale and include information describing use of materials, color and all accessory items such as awnings or signage of the proposed dwelling or non-residential building or structure.

11. Topographical Map – A topographical map of the site with contours at a minimum of two (2) foot intervals.

12. Site Plan – One sheet summarizing the proposal, showing existing and proposed topography, buildings, parking, drives, walls and trails, recreation facilities, landscaping, building uses, any major drainage and utilities elements such as detention areas.

807.4 Report Submission

1. Land Evaluation Report – This report shall contain all of the information required by Section 807.3.4 not otherwise appropriately included on the Land Evaluation Map.

2. Population and Economic Impact Evaluation Report – This report shall contain the following information including a summary of these factors in the text and an analysis of their relationship to the development proposals.

- a) Population characteristics:
 - projected total population
 - projected population of each section
 - projected population by age groups: 0-4, 5-13, 14-18, 19-35, 36-50, 51-65, 65 plus
 - projected population by dwelling unit type
 - projected family characteristics (head of household, wife, children under eighteen [18] years of age)
- b) Economic characteristics:
 - projected work force
 - probable employment by location
 - estimated disposable family income
 - probable retail shopping by location
 - projected permanent jobs created by the proposed development

This report shall also contain an analysis indicating the projected marketability of the dwelling units in the development with respect to effective demand specifically relating the site to the Town. Public and/or subsidized housing shall be identified and an explanation of the assistance program and the number of units affected shall be included.

3. Traffic Impact Evaluation Report – This report shall be summarized in text form with an analysis related to the development proposals:

- a) Projected number of motor vehicle trips to enter or leave the site for an average day and for a peak hour;
- b) Projected traffic flow patterns as related to the Road and Parking map including vehicular movements at all major existing and proposed intersections; and
- c) Evaluation of the impact of this traffic upon existing streets in relation to capacities using both current and redesign criteria.

4. Utilities Impact Evaluation Report – This report shall contain an analysis of the provisions for gas, electricity, telephone, mail service, sewage disposal, and refuse storage and collection.
- a) Construction processes shall be specified to include common trenches where feasible. The probable impact from utility needs shall be determined and shall include:
- The estimated daily and peak hour volume of public water demand;
 - Evaluation of the estimated impact of water demands upon existing service facilities in relation to defined sewage disposal and public water capacities;
 - Description of proposed sewage treatment facility or disposal system including type and design capacity;
 - Evaluation of the estimated impact of effluent from individual sewage disposal systems of common sewage treatment facilities in terms of quality and quantity on soil conditions, groundwater levels and other relevant natural site characteristics; and
 - Description of manner or method by which proposed sewage disposal facility shall be maintained and operated.
5. Drainage Impact Evaluation Report – This report shall contain an analysis of all drainage improvements including off-site conditions to facilitate the flow of stormwater as identified in the Land Coverage and Drainage Map. Construction processes shall be specified for each drainage system.
- a) The projected maximum volumes at the collecting point for each drainage basin for fifteen (15) and one hundred (100) year storms; and
- b) The estimated impact of stormwater upon existing service facilities in relation to existing stormwater capacities.
6. Common Open Space Analysis Report – This report shall contain an explanation of how the common open space shall be maintained including an estimate of additional charges or costs to be paid by each housing unit. The method by which citizen participation is to be provided in the maintenance of these facilities shall be specified. All improvements to be placed on the land shall be described. A statement of conformance or lack thereof to the requirements of Section 707, Design Ratios, shall be included. The probable utilization of the common open space in the development shall be discussed including:
7. Schedule Report – If the development of the site will take place over more than one year, the developer shall supply development and improvement schedules. This report shall contain the following information:
- a) The construction of any public improvements explaining how these improvements are to be integrated with the development;

- b) The number of dwelling units and the number of square feet of non-residential uses to be constructed each year and their estimated values; and
- c) The guarantee which shall be provided to the Town to assure construction of specified improvements.

8. Supplemental Information – The Board of Appeals and/or its review body, the Planning Board, may request additional or supplemental information as may be deemed necessary to make a thorough and proper review and evaluation of and decision on the development application.

807.5 Decision

1. The Board of Appeals shall act within ninety days following a public hearing. This time period may be voluntarily extended upon agreement of the Town and the applicant. The decision shall be filed with the Town Clerk together with all plans appropriate to the decision. The Board of Appeals shall state in writing reasons for its decision and in the case of disapproval specifically the sections of this Bylaw which have not been met by the applicant in his development application submission. Two (2) copies of the decision shall go to the Planning Board and one (1) copy to the applicant. One (1) transparent mylar copy of the approved development application shall be filed with the Board of Appeals within sixty (60) days of such approval.

2. No Special Permit granted by the Board of Appeals shall take effect until the decision together with the plan relating thereto are recorded with the title of the land or lot in the Plymouth Registry of Deeds and until a certified copy of said recording is received by the Board of Appeals. The owner of the land in question shall pay for and be entirely responsible for filing the decision of the Board of Appeals.

3. The granting of a Special Permit does not constitute the issuance of a building permit, which must be obtained by application to the Zoning Enforcement Officer as provided in this Bylaw.

ARTICLE 900 – ADMINISTRATION

901 ENFORCEMENT

This Bylaw shall be enforced by the Board of Selectmen, either directly or by a Zoning Enforcement Officer or agent appointed by the Board. No person shall erect or externally alter a building or other structure in the Town without a permit from the Board or Zoning Enforcement Officer upon a form prescribed by the Board. No person shall occupy a building, structure, or premises without a certificate of occupancy.

902 STOP ORDER

902.1 Scope

A Stop Order shall be issued for any violation of the provisions of this Bylaw in unauthorized sale or lease; construction in deviation from approved plans; subsequent actions contrary to the stated activities and uses permitted by approved plans; failure to adequately maintain common open space; or inadequate or insufficient construction of improvements.

902.2 Notice

A Stop Order shall be issued by the Zoning Enforcement Officer and delivered to the owner of any property or his agent. Delivery shall be construed to include mailing of such Order, postage prepaid, to said owner or posting on the property. Copies of such Order shall be maintained by the Town.

- a. Contents – The Stop Order shall be in writing and shall state the nature of the violation and conditions under which work or use may continue. A time limit, not to exceed five (5) days, shall be permitted to allow for the necessary correction of the violation.
- b. Unlawful Continuance – Any person who shall continue in violation of the Stop Order shall be in violation of this Bylaw and shall be subject to the enforcement provisions of this Bylaw.
- c. Failure to Issue – The failure of the Town to obtain a Stop Order for any reason whatsoever shall not be interpreted as an estoppel against the Town from pursuing any other legal remedy permitted under law.

903 BUILDING OR USE PERMIT

903.1 Issuance

No building or structure shall be used, constructed, relocated, added to or demolished without a building permit having been issued by the Zoning Enforcement Officer. No such permit shall be issued until such construction, alteration, or use, as proposed complies in all respects with the provisions of this Bylaw or with a decision rendered or Special Permit granted by the Board of Appeals, or any other Special Permit Granting Authority authorized under this Bylaw.

903.2 Planned Developments

Prior to issuance of a building permit to construct an exterior alteration or addition to an existing structure or dwelling in a Planned Development, application shall be made to the Zoning Enforcement Officer in the usual manner. The Zoning Enforcement Officer shall forthwith forward the application along with all plans and specifications to the Design Review Board and the development's Homeowners' Association for their review and recommendation. In both instances, the recommendation shall be forwarded to the Zoning Board of Appeals and the Zoning Enforcement Officer within twenty-one (21) days. Failure to make such recommendation within twenty-one (21) days of the receipt of the referral shall be deemed to constitute approval. Once the recommendations have been received by the Zoning Board of Appeals and the Zoning Enforcement Officer, or said twenty-one (21) days have elapsed, an appointment at the next administrative meeting of the Board will be scheduled. At that time, the Zoning Board of Appeals shall determine whether the proposed alteration or addition exceeds the terms of the Special Permit under which the development was constructed and requires an amendment to said Special Permit. If the Board of Appeals determines that an amendment is not required, it shall notify the Zoning Enforcement Officer and a building permit may be issued.

904 OCCUPANCY PERMIT

904.1 Permanent Occupancy

No premises and no building or structure erected, altered or in any way changed as to construction or use, under a permit or otherwise, shall be occupied or used without a Certificate of Zoning Compliance signed by the Zoning Enforcement Officer. Such certificates shall not be issued until the premises, building or structure, and its proposed uses and accessory uses comply in all respects with this Bylaw. A record of all

applications and occupancy permits shall be kept on file by the Zoning Enforcement Officer.

A Certificate of Zoning Compliance shall be conditional on the maintenance of full compliance with the provisions of this Bylaw in effect at the time of issuance or with a decision of, or Special Permit granted by the Board of Appeals or any other Special Permit Granting Authority authorized by this Bylaw and shall lapse if such compliance fails.

904.2 Applications

Applications for Certificate of Zoning Compliance shall be granted or denied in writing within ten (10) days of receipt by the Zoning Enforcement Officer.

905 PLOT PLAN ACCOMPANYING APPLICATION

905.1 Minimum Requirements

Any application for a building or use permit or a certificate of occupancy shall be accompanied by a plot plan, in triplicate, accurately drawn to a scale of one (1) inch equaling forty (40) feet, showing the actual shape, area and dimensions of the lot to be built upon, the exact location and size of any buildings or structures already on the lot, the location of proposed alterations to and enlargements of existing buildings or structures, driveways, the location of new buildings or structures to be constructed, together with the lines within which all buildings or structures are to be erected or enlarged, the existing and intended use of each building or structure and all streets and ways on or adjacent to the lot, delineation of any Wetlands Protection Overlay District, Flood Hazard Areas Overlay District or Aquifer Protection Overlay District areas located within the lot, or include a statement on the plan stating, "No part of lot is within zoned Wetlands Protection Overlay District, Flood Hazard Areas Overlay or Aquifer Protection Overlay District" and such other information as the Zoning Enforcement Officer may determine is necessary. In the case of a building or use permit for an interior improvement to a building or structure, a plot plan shall not be required.

905.2 Additional Requirements

In addition, for all new buildings and structures and all existing buildings and structures to be externally enlarged or expanded in ground area to an extent greater than thirty (30) percent of internal floor area or ground coverage, or six hundred (600) square feet, whichever is larger, plot plans shall show existing and approved abutting street grades, the proposed elevation of the top of the foundation of existing and proposed buildings or structures, existing and proposed topography, existing septic disposal

systems, private wells, wetland boundary delineation as approved by the Conservation Commission, gas, water and other public utilities in the abutting street and the zoning classification of the abutting properties. Plot plans shall also show such other information as may be necessary to provide for the verification of compliance with the applicable provisions and the enforcement of the Bylaw, including, but not limited to, off-street parking, screening and fencing. Plot plans shall be certified by a registered professional engineer or land surveyor. A record of all applications, plans and permits shall be kept on file by the Zoning Enforcement Officer.

906 BOARD OF APPEALS

A Board of Appeals is hereby established which shall have all of the powers of a Board of Appeals under G. L. c. 40A. The Board of Appeals shall consist of five (5) members appointed by the Selectmen, one (1) of which shall be an attorney, and one (1) who shall conform to the requirements under the State Building Code with terms so arranged that no two (2) members' terms shall expire in one (1) year. The Board of Selectmen shall also appoint at least two (2) associate members annually. No member or associate member shall act on any appeal in which he/she has a personal or financial interest. In case of absence of any regular member, his/her place shall be taken by an associate member.

Said Board of Appeals shall exercise the authority and powers and perform the duties set for in G. L. c. 40A, in this Bylaw and the following:

906.1 Appeals from the Zoning Enforcement Officer or Other Administrative Official

An appeal to the permit-granting authority as the zoning ordinance or Bylaw may provide, may be taken by any person aggrieved by reason of his/her inability to obtain a permit or enforcement action from any administrative officer under the provisions of this chapter, by the regional planning agency or by any person, including an officer or board of the Town, or of an abutting city or town aggrieved by an order or decision of the Zoning Enforcement Officer, or other administrative official, in violation of any provisions of this chapter or any ordinance or Bylaw adopted thereunder.

906.2 Special Permits

To hear and decide applications for Special Permits as provided in this Bylaw, subject to any general or specific rules therein contained, and including authority to impose appropriate terms, conditions and safeguards in its decisions.

Applications shall be approved only upon the Board's written determination that the proposal's benefits to the Town will outweigh any adverse effects for the Town or vicinity after consideration of the following, among other things, were germane:

1. Suitability of the proposed location for this proposal, taking the following into consideration:
 - a) Nearby land uses, and whether they would be supported by or damaged by having the proposed use nearby.
 - b) Uses of the site which would be displaced by or preempted by this use.
 - c) Adequacy of roads, water, drainage and other public facilities serving the location.
 - d) Whether the site is more sensitive than are most similarly zoned sites to environmental damage from the proposal such as: erosion, siltation, potential groundwater or surface water contamination, especially if affecting public or private water supplies, habitat disturbance or loss of valuable natural vegetation.
 - e) Contribution to cumulative impact upon municipal water supplies, including consideration of nitrate-nitrogen loading, if within a defined Aquifer Protection Overlay District.
2. Activity type, mix and intensity, taking the following into consideration:
 - a) Whether the proposal contributes to the diversity of services available locally;
 - b) Seasonal consequences, including addition to peak period congestion;
 - c) Service to local, in preference to regional, markets;
 - d) For business developments, likelihood of employment opportunities being created for residents, and the quality of those opportunities; and
 - e) For residential developments, how substantially, if at all, the proposal contributes to housing diversity.
3. Building and site design, including consideration of the following:
 - a) Whether scenic views from public ways and developed properties have been considerately treated;
 - b) Whether compatibility with neighborhood character has been considerately treated;
 - c) Whether reasonable efforts have been made to minimize visibility of parking and service areas from public streets;
 - d) Whether any traditional public access to or along shoreline has been maintained; and
 - e) Compliance with the criteria of Section 424.4 and/or Section 615 under Site Plan Approval.
 - f) Compliance with Section 404.20 entitled, "Determination of Suitability of Piers."

A Special Permit granted under this authority shall lapse within a two (2) year period, or a shorter period if so provided, and if a substantial use thereof has not sooner

commenced except for good cause or if construction has not begun within the period except for good cause.

The Planning Board, when acting as a Special Permit Granting Authority, is authorized to appoint associate members to the Planning Board for the purpose of acting on special permit applications, in accordance with the following procedures:

- 1) The Planning Board may, by a majority vote, appoint up to two (2) associate members at a public hearing after such positions have been publicly advertised;
- 2) The Chair of the Planning Board may designate an associate member to sit on the board for the purposes of acting on a special permit application in case of absence, inability to act, or conflict of interest, on the part of any member of the Planning Board or in the event of a vacancy on the board.

906.3 Variances

To grant upon appeal or upon petition with respect to particular land or structures a variance including a use variance from the terms of this Bylaw where the Board of Appeals specifically finds that, owing to circumstances relating to the soil conditions, shape or topography of such land or structures and especially affecting such land or structures but not affecting generally the zoning district in which it is located, a literal enforcement of the provisions of this Bylaw would involve substantial hardship, financial or otherwise, to the petitioner or appellant, and that desirable relief may be granted without substantial detriment to the public good and without nullifying or substantially derogating from the intent or purpose of this Bylaw.

906.4 Referral

In addition to those applications for a Special Permit which require site plan approval under Section 615, the Special Permit Granting Authority shall refer a Special Permit application to the Board of Appeals, Board of Health, Conservation Commission, Duxbury Bay Management Commission, Planning Board, Water Advisory Board and Design Review Board for written comments and recommendations before taking final action on said Special Permit application. In addition to the above noted Boards, the Special Permit Granting Authority may refer a Special Permit application to any other Town agency/board/department for comments and recommendations if it so desires before taking final action on said Special Permit application. A public hearing on said referral shall not be required.

Any such board or agency to which applications are referred for comment shall make its recommendations and send copies thereof to the Special Permit Granting Authority and the applicant within thirty-five (35) days of receipt of the referral request by said board

or agency or the referral request by said board or agency or there shall be deemed no opposition or desire to comment. The Special Permit Granting Authority shall not act upon said Special Permit until either comments from referred boards or agencies have been received, or said thirty-five (35) days have elapsed, whichever is sooner. Applications referred to more than one (1) board or agency may be reviewed jointly by said boards or agencies.

906.5 Application Requirements and Determinants for Special Permits from the Board of Appeals:

A. Requirements:

With each application for a Special Permit, except as otherwise provided for a development application, three (3) copies of a site plan shall be submitted to each of the following boards: the Board of Appeals, Planning Board, Board of Health, Conservation Commission and Department of Public Works. One (1) copy of the application shall be submitted to each of the Zoning Enforcement Officer and the Design Review Board. To the extent to which the following information is necessary to delineate and describe site conditions related to the proposed use for which the Special Permit is requested, said site plan shall show among other things: all existing and proposed buildings, structures, parking spaces, driveways, driveway openings, service areas, and other uses, existing and proposed contours at two-foot intervals, proposed clear sight distances at all driveway openings, existing and proposed ways, existing and proposed water sources and volumes of use, existing traffic counts (from town data) and estimated future traffic volumes, land uses, abutting and across the street from the site, the zoning districts within one thousand (1,000) feet of the site perimeter, desirable existing and proposed trees on the premises, all facilities for refuse storage, sewerage, refuse and other waste disposal and for surface water drainage or retention and all principal landscape features, such as fences, walls, planting areas and walks on the lot. Said plan shall also illustrate public and private water supply wells within the site boundaries and on adjacent properties, and where applicable, the limits of any defined aquifer protection district area as specified in Section 406 of this Zoning Bylaw. Signs and lighting shall also be included. Said plan shall be prepared by a registered engineer and/or land surveyor at an appropriate scale to show clearly dimensions, legends and all other information deemed necessary to describe the site and its conditions.

B. Determinants:

In approving a site plan as part of the Special Permit, the Board of Appeals shall assure to a degree consistent with a reasonable use of the site for a purpose permitted within the district in which it is located:

- Protection for adjoining premises against detrimental or offensive use on the site;
- Adequacy of space for vehicular access to and off-street parking and loading/unloading on the site;
- Convenience and safety of vehicular and pedestrian movement within the site and in relation to adjacent ways and land;
- Adequacy of water supplies and distribution for domestic uses fire protection;
- Adequacy of the methods of storage and disposal for sewage, refuse and other wastes resulting from the uses permitted on the site and the methods of drainage or retention of surface water;
- Maintenance and promotion of dispersed shade on paved areas through the effective use of established and/or new trees;
- Conformance to sign regulations in Section 601.

907 APPEAL OF BOARD OF APPEALS DECISION

Any person aggrieved by a decision of the Board of Appeals or any other special permit granting authority may take an appeal to the courts in accordance with G. L. c. 40A.

908 ADMINISTRATION OF DEVELOPMENT APPLICATIONS

908.1 Duties and Responsibilities

The Board of Appeals shall be responsible for the administration of the Planned Development Special Permit procedures and for scheduling, advertising and conducting all public hearings, the taking and evaluating of testimony and the approval with or without conditions or the denial of a Development Application.

908.2 Designated Review Body

The Board of Appeals shall designate the Planning Board as the review body for Special Permit procedures dealing with Planned Development.

908.3 Duties and Responsibilities of the Review Body

The Planning Board shall administer the review of information required by this Bylaw; shall assign to the appropriate Town committees, commissions and boards including, but not limited to, the following: Board of Selectmen, School Committee, Board of Health, Water Commissioners, Conservation Commission, Historical Commission, Department of Public Works, Finance Committee, Fiscal Advisory Committee, Town Assessors, Fire Chief and Open Space and Recreation Committee and Design Review Board, and the review of data particular to each of these bodies; shall set time limits for the review and reports consistent with the provisions herein; shall conduct meetings; shall prepare written findings; and shall give testimony to the Board of Appeals.

909 DESIGN REVIEW BOARD

909.1 Establishment and Membership

A Design Review Board is hereby established. Said Board shall consist of five (5) members and two (2) alternate members who shall be appointed by the Board of Selectmen in the manner prescribed herein. Members shall include, where possible in order of preference, an architect, a landscape architect, a designee of the Planning Board, a lawyer, a realtor, a nominee of any of the local historical societies or a contractor. Members shall serve for three (3) years or until their successors are appointed, except that of the five members first appointed one shall serve for three (3) years, two (2) shall serve for two (2) years and two (2) shall serve for one (1) year each. Members may be removed for cause by the Board of Selectmen following written charges and a properly advertised public hearing. A vacancy shall be filled forthwith by appointment by the Board of Selectmen for the unexpired term. Two (2) alternate members of the Board shall be appointed each year by the Board of Selectmen for a term of one (1) year in accordance with the order of occupation preference designated herein.

909.2 Organization and Proceedings

The Design Review Board shall elect a chairman from among its members to serve for a term of one (1) year. The Board shall adopt such guidelines as may be considered necessary to the conduct of its duties and responsibilities. The Board shall keep records of its proceedings, any plans, photographs or other drawings or documents pertaining to each matter reviewed by the Board and a statement of its recommendations and the reason therefore.

909.3 Duties and Procedures

The Design Review Board shall assist the Planning Board and Zoning Board of Appeals in reviewing development applications with respect to those matters referred to it by the respective Boards. It shall also make recommendations on such other plans and applications as the Zoning Board of Appeals, Planning Board and Zoning Enforcement Officer may submit to it. The Design Review Board shall submit written reports within twenty-one (21) days of the date of submittal for review. All recommendations and reports of the Design Review Board shall be done with the concurrence of at least three (3) members. The Zoning Board of Appeals may modify any recommendations of the Design Review Board. Any such request for modification shall be dealt with by the Zoning Board of Appeals as an administrative matter.

910 REPETITIVE PETITIONS

910.1 Bylaw Amendments

No proposed change in this Bylaw which has been unfavorably acted upon by the Town Meeting shall be considered by the Town Meeting within two (2) years after the date of such unfavorable action unless adoption of the proposed change is recommended in the final report of the Planning Board to Town Meeting.

910.2 Board of Appeals Decision

No appeal, application or petition which has been unfavorably and finally acted upon by the Board of Appeals shall be acted favorably upon within two (2) years after the date of final unfavorable action unless all but one (1) of the members of the Planning Board first find specific and material changes in the conditions upon which the previous unfavorable action was based and consent to a re-hearing and unless the Board of Appeals finds such changes in conditions warrant such favorable action.

911 PENALTIES

911.1 Conditions

Any person violating any of the provisions of this Bylaw shall be fined not more than fifty dollars (\$50.00) for each offense. Each day that any violation is permitted to exist after written notification thereof by the Zoning Enforcement Officer shall constitute a separate offense. The Town shall be the beneficiary of all fines paid including the costs of prosecuting any legal action if allowable by law.

911.2 Applicability

The penalty provisions of this Bylaw may be imposed upon the developer, and owner, general agent, tenant architect, any contractor or builder, or any person having an identifiable property interest including a mechanic's lien, mortgage or other attachment against the property.

911.3 Non Criminal Disposition

In addition to the procedure of enforcement as described above, the provisions of this Bylaw may also be enforced by the Zoning Enforcement Officer, by non criminal complaint pursuant to the provisions of MGL Chapter 40, Section 21D. The penalty for violation of any provision of this bylaw shall be twenty-five dollars (\$25.00) for the first offense; fifty dollars (\$50.00) for the second offense; one hundred dollars (\$100.00) for the third offense; and two hundred dollars (\$200.00) for the fourth offense and each subsequent offense.

912 AMENDMENT

912.1 Authority

This Bylaw may be amended from time to time in accordance with the provisions of G. L. c. 40A. An amendment may be initiated by submitting a proposed change to the Board of Selectmen, by the Board of Selectmen, the Board of Appeals, an individual owning land in the Town, registered voters of the Town pursuant to G. L. c. 39, sec. 10, the Planning Board and the Metropolitan Area Planning Council, within fourteen (14) days of the receipt of a proposed change, the Board of Selectmen shall submit it to the Planning Board for review, a public hearing and a report.

912.2 Public Hearing

The Planning Board shall hold a public hearing on any proposed amendment, first causing notice of the time, place of such hearing and sufficient identification of the subject to be discussed in the manner prescribed in G. L. c. 40A.

912.3 Report

The Planning Board shall, after hearing all testimony regarding any proposed amendment, submit a final report with its recommendations to the Town Meeting in accordance with and subject to the provisions of G. L. c. 40A.

913 SEVERABILITY

The provisions of this Bylaw shall be severable, and if any of its provisions shall be held to be unconstitutional, the validity of any of the remaining portions of this Bylaw shall not be affected.

914 EFFECTIVE DATE

An amendment to this Bylaw shall take effect on the date on which such amendment was adopted by a favorable two-thirds vote of Town Meeting subject to the publications requirements as provided in G. L. c. 40A, sec. 5.

915 CONFLICT WITH OTHER LAWS AND REGULATIONS

This Bylaw shall not interfere with or annul any Bylaw, rule, regulations or permit provided that, unless specifically excepted where this Bylaw is more stringent, it shall control.

AMENDMENTS SINCE MARCH 2003

**ALL AMENDMENTS LISTED BELOW HAVE BEEN INCORPORATED
INTO THE November 14, 2018 PRINTING OF THE BYLAW**

<i>ANNUAL TOWN MEETING DATE</i>	<i>TOWN MEETING ARTICLE #</i>	<i>SECTION(S)</i>	<i>SUBJECT</i>	<i>ATTORNEY GENERAL APPROVAL</i>	<i>PUBLIC NOTICE OF ATTORNEY GENERAL APPROVAL</i>
November 24, 2003	7	425	Correct Typographical Error	December 2, 2003 February 20, 2004	February 20, 2004 Posted by Constable
March 13, 2004	14	560	Inclusionary Housing	June 30, 2004	July 14 & 21, 2004 Duxbury Clipper
March 13, 2004	16	201	Waterfront Scenic Area Overlay District	June 30, 2004	July 14 & 21, 2004 Duxbury Clipper
March 13, 2004	17	200, 300, 400, 900	Piers	June 30, 2004	July 14 & 21, 2004 Duxbury Clipper
March 13, 2004	24	202.2	Zoning Map	June 30, 2004	July 14 & 21, 2004 Duxbury Clipper
March 13, 2004	25	906.2	Associate Member	June 30, 2004	July 14 & 21, 2004 Duxbury Clipper
March 13, 2004	29	560	Correct Typographical Error	June 30, 2004	July 14 & 21, 2004 Duxbury Clipper
March 15, 2005	24	404.8, 615.7(2), 906.4	Bay Management Commission	May 17, 2005	June 1 & 8, 2005 Duxbury Clipper
March 15, 2005	30	202.2, 402	FIRM Maps	May 17, 2005	June 1 & 8, 2005 Duxbury Clipper
March 14, 2006	36	202.1, 410, 420, 430	Zoning Map	April 3, 2006	April 26 & May 3, 2006 Duxbury Clipper
March 12, 2007	27	202.1, 410, 420, 430	Zoning Map	April 23, 2007	May 16 & May 23, 2007 Duxbury Clipper
March 12, 2007	29	803.2, 804.1	Planned Development Submission	April 23, 2007	May 16 & May 23, 2007 Duxbury Clipper
March 12, 2007	33	404.20	Piers	April 23, 2007	May 16 & May 23, 2007 Duxbury Clipper
March 11, 2008	32	570.00	Affordable Housing Bylaw	April 29, 2008	May 7 & May 14, 2008 Duxbury Clipper
March 11, 2008	33	560.11	Payment Schedule - Fees in Lieu of Affordable Housing	April 29, 2008	May 7 & May 14, 2008 Duxbury Clipper
March 14, 2009	42	202.1, 410, 420, 430	Zoning Map	April 7, 2009	May 6 & May 13, 2009 Duxbury Clipper

March 14, 2009	43	403.5, 404.6, 410.3, 421.4, 422.3, 610.4, 610.5	Wireless Telecommunications (WPOD)	April 7, 2009	May 6 & May 13, 2009 Duxbury Clipper
March 13, 2010	17	421.3.7, 302	Green Communities	June 30, 2010	July 7 & July 14, 2010 Duxbury Clipper
March 13, 2010	18	616 (new)	Community-Scale Wind Facilities Administrative Site Plan Review - Remove	June 30, 2010	July 7 & July 14, 2010 Duxbury Clipper
March 13, 2010	19	615	Religious & Educational	June 30, 2010	July 7 & July 14, 2010 Duxbury Clipper
March 12, 2011	33	302	Definition Accessory Structure	July 5, 2011	July 20 & July 27, 2011 Duxbury Clipper
March 12, 2011	35	410.6	Accessory Apt. Alteration 5-yr to 1- yr	July 5, 2011	July 20 & July 27, 2011 Duxbury Clipper
March 12, 2011	37	302, 410.3	Change "Guest House" to "Bed & Breakfast"	July 5, 2011	July 20 & July 27, 2011 Duxbury Clipper
March 8, 2014	24	617	Medical Marijuana Moratorium	April 7, 2014	April 16 & April 23, 2014 Duxbury Clipper
March 14, 2015	35	560.5	Payments for Fees in Lieu of Construction of Affordable Housing	June 19, 2015	July 1 & July 8, 2015 Duxbury Clipper
September 19, 2016	2	202.1, 202.2, 402 (new)	Floodplain Districts	December 21, 2016	January 4 & January 11, 2017 Duxbury Clipper
March 11, 2017	15	401.4.4 (new)	One Dwelling per Lot	July 20, 2017	August 18, 2017 Duxbury Clipper
March 11, 2017	16	530.2	RCC Special Permit Applicability	July 20, 2017	August 18, 2017 Duxbury Clipper
March 11, 2017	35	202.1, 202.2, 618 (new)	Ground Mounted Solar Overlay District	July 20, 2017	August 18, 2017 Duxbury Clipper
March 2018 TM	15	New 619	Ban Recreational Marijuana	June 4, 2018	August 1 and 15, 2018 Duxbury Clipper
March 2018 TM	32	New 621	Solar Photovoltaic Facilities	August 9, 2018	August 13 and 27, 2018 Duxbury Clipper
March 2018 TM	33	Amend 404.6 and 404.10	Solar Photovoltaic Facilities SPGA Planning Board in WPOD	July 9, 2018	August 1 and 15, 2018 Duxbury Clipper
March 2018 TM	16	Delete 617	Expired moratorium Medical Marijuana Facility	July 9, 2018	August 1 and 15, 2018 Duxbury Clipper
September 2018 Special	6	410.3 special permit use RC	add Veterinary Hospital	PENDING	PENDING
September 2018 Special	7	200 and 400	Create new NB LIGHT District	PENDING	PENDING

APPENDIX I

2018 ANNUAL REPORT SELF EVALUATION

ANNUAL EVALUATION OF YEARS

Municipality/Organization: Town of Duxbury, MA

EPA NPDES Permit Number: MA041-34

MADEP Transmittal Number: W114295

Annual Report Number

& Reporting Period: [No. 15: April 1, 2017 -March 31, 2018](#)

NPDES PII Small MS4 General Permit Annual Report

Part I. General Information

Contact Person: **Peter Buttkus**

Title: **Director of Public Works**

Telephone #: **781-934-1100**

Email: **Buttkus@Town.Duxbury.MA.US**

Certification:

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Signature: _____

Printed Name: **Peter Buttkus**

Title: **Director of Public Works**

Date: _____

Part II. Self-Assessment

In general, the Town of Duxbury's stormwater management activities for the fifteenth year of the General Permit (April 1, 2017 through March 31, 2018) were in conformance with the Notice of Intent (Massachusetts DEP form BRP WM 08A) and schedule submitted in July 2003. The Town developed a Stormwater Management Plan with program priorities for 2003-2008 including:

1. Achieving regulatory compliance, particularly EPA and DEP Phase II NPDES permit requirements;
2. Incorporating storm water protection measures into municipal activities;
3. Focusing activities on target pollution reduction (e.g. Section 303.d. waters and protecting the Town's water supply);
4. Ensuring that the Program is current and innovative; and
5. Providing Program administration.

During the Permit Year 15, the Town reviewed their existing Stormwater Management Plan and initiated a draft revised, updated Plan. The Town also continued active outreach efforts as evidenced by numerous volunteer clean-ups. Catch basin and street sweeping efforts met the goals of the EPA General Permit and development projects were adequately regulated through the Town's permitting process and on-site inspection/enforcement program. Continued efforts with the Plymouth County Mosquito Control Program included volunteer work to remove blockages, brush and other obstructions from ditches and streams to prevent overflows or stagnation.

Part III. Summary of Minimum Control Measures

1. Public Education and Outreach

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 15 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 16 (if applicable)
1A	Put up posters in schools and Town Buildings	DPW Director/School Business Manager	Install posters in public buildings	BMP has been completed.	Update dated and/or worn posters as necessary.
1B	Stencil Catch Basins	DPW/Citizens Groups	Stencil every catch basin leading to waters of the U.S.	BMP has been completed.	Stencil catch basins as necessary.
1C	Pamphlet in water bills	DPW Director/ Water Supt.	Circulate information to 5,550+/- customers	Stormwater information/pollution prevention was contained in this year's water bills.	Stormwater pamphlets will be included with the May 2018 water bills.
1D	Educational Material on website	DPW Director/ Dept. Web Manager	Provide on-line education	Material posted on Town DPW/Commission web page.	BMP Complete.
1E	Educate Community Groups	Conservation Agent	Conduct one seminar/year	Environmental Partners meeting with Town on June 26, 2017 to review requirements under the MS4 Permit	Continue established education programs detailed below.

Additional Information:

The Town of Duxbury Conservation Agent has participated in and is on the steering committee for the Watershed Action Plan for the south coastal watershed, being funded by the EOE. Process of education through this forum is ongoing. Harbormaster shellfish warden also takes school classes for tour of estuary and teaches ecology of this resource. Duxbury Bay Maritime School also teaches maritime ecology to the classes each summer (1600 students). Montessori School students take water samples at the Bluefish River and identify pathogens. In addition the Duxbury Bay Commission and Duxbury Beach Reservation conduct interactive programs that involve many volunteers and users of these resources. The Beach Reservation maintains an agreement with Mass. Audubon to continue their endangered species monitoring and weekly educational programs.

2. Public Involvement and Participation

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 15 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 16 (if applicable)
2A	Stencil Catch Basins	DPW Director/ citizen groups	Stencil every catch basin leading to waters of the U.S.	Town has put plaques on all storm drains to replace existing stencils.	BMP Completed.
2B	Community Cleanup Days	Planning Board /Director	Maintain committee and work on water quality goals	“Duxbury Litter Sweep” community group continues very active involvement with cleanups scheduled throughout the year. Additionally, Town-wide 1 day cleanup was held with DPW coordinating solid waste collection, pickup and disposal.	Continued support of volunteer groups and 1-day Town-wide cleanup effort.
2C	Paint Day Collections	DPW Director/ Operations Manager	Hold 4 paint disposal days/year	Paint collections were held once this past year.	Continue to sponsor Paint and HHW collections annually.
2D	Open Space & Recreation Committee	Board of Selectmen / Town Mgr	Maintain Committee and work on water quality goals	Committee meets regularly to maintain open space areas to preserve water quality /clean watersheds (12 and 18 acre parcels were purchased in permit year 15). Committee sponsored Earth Day and Arbor Day activities as well as trail day.	Continue Committee’s mission and look for additional DCS grant opportunities for open space acquisition.
2E	Community Preservation Committee	Board of Selectmen / Town Mgr	Maintain Committee and work on water quality goals	Committee met regularly this past year. Work this past year involved support land purchasing.	Continue CPC mission with focus on stormwater improvement and watershed protection.

3. Illicit Discharge Detection and Elimination

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 15 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 16 (if applicable)
3A	Map Drainage System	DPW Director / GIS Comm.	Know approximate locations of all outfalls leading to waters of the U.S.	The Town of Duxbury created an 11 x 17 map book of their MS4 system in a GIS platform in Year 12, which included mapping of 350 outfalls, 1767 Catch Basins, and 599 Manholes. 173 Outfalls were located, inspected, and mapped with a GPS.	All known outfalls have been inspected and sampled. If additional outfalls are identified, these will be inspected and sampled.
3B	Coordinate with Division of Marine Fisheries on testing Duxbury Bay outfalls	Conservation Agent / BOH Agent	Maintain testing of Duxbury Bay	Water quality testing continues with the DMF.	Continue excellent working relationship with the DMF on outfall testing.
3C	Investigate pollution hot spots as needed via test results	Conservation Agent, BOH Agent, DPW Director	Find any hot spots found leading to waters of the U.S.	BOH tested beach locations for bacteria throughout the summer. BOH apprised by DMF of any anomalies observed during their testing. Formal procedures for illicit discharge investigation procedures detailed in the Town's IDDE Plan which was completed in Permit Year 10.	Continued IDDE work by BOH/DMF as well as DPW workers cleaning MS4 (catch basins).
3D	Stencil Catch Basins	DPW Director/citizen groups	Stencil every catch basin leading to waters of the U.S.	Stencils were replaced with plaques. BMP Completed.	BMP Completed.
3E	Paint Day Collections	DPW Director / Operations Manager	Hold 4 paint disposal days per year.	Paint is collected at specific times from April through October. HHW days were held once this past year.	Continue to sponsor Paint and HHW collections. Paint collection days are scheduled for April 21 st , June 16 th , September 15 th , and November 17 th 2018. The HHW day for Duxbury/Kingston is to be held on May 19 th , 2018.

4. Construction Site Stormwater Runoff Control

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 15 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 16 (if applicable)
4A	Proposed Zoning Changes re: drainage quality to Town Meeting	Comprehensive Plan, Zoning Bylaw Implementation Committee	Put forth article to Town Meeting	BMP Completed	Enforce Town Bylaw.
4B	Proposed changes re: drainage to Conservation Bylaw to Town Meeting	Conservation Commission / Agent.	Put forth article to Town Meeting	BMP Completed.	Enforce Town Bylaw.
4C	Project reviewed by DRT (Development Review Team)	Planning Director / Department Heads	Provide comments to regulatory authority on all regulated projects	DRT met during this past year to review proposed developments and ensured stormwater-related issues were compliant with state and local bylaws/guidance documents.	Continued review of applicable development projects.
4D	Review & Update Subdivision Rules and Regulations re: drainage BMP's	Planning Director / DPW Director / Planning Board	Review and Update as needed biannually	BMP Completed.	Enforce subdivision rules/regulations.
4E	Enforce all approvals by Regulatory Authorities	Planning Director / BOH Agent / ConCom Agent / ISD Director / DPW Director	Project not signed off on unless properly constructed.	Only those projects properly constructed were signed off on by regulatory authorities.	Continued enforcement of all conditional approvals issued by regulatory authorities.

5. Post-Construction Stormwater Management in New Development and Redevelopment

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 15 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 16 (if applicable)
5A	Review BMP Operations manuals as part of Con Com	Conservation Agent / Commission	All Regulated projects have adequate O&M Plan	Conservation Commission/Agent reviewed Stormwater O&M plans for all applicable projects and enforced owner compliance with O&M requirements.	Post-construction conditions will be monitored as enforced.
5B	Require & Review BMP Operations manuals re: DRT reviews	Planning Director / Department Heads	All Regulated projects have adequate O&M Plan	It is standard operating procedure for the Development Review Team (DRT) to require and review Stormwater O&M Plans for all applicable projects.	DRT to continue reviews.
5C	Maintain drainage BMP's on projects taken over by Town.	DPW Director / Operations Manager	Maintain functioning of BMP's	Upon acceptance by Town, each street is added to the Street Sweeping, catch basin cleaning and BMP monitoring program.	Town to continue O&M protocol for accepting projects.
5D	Request annual maintenance / inspection reports from regulated projects	Planning Director / BOH Agent, ConCom Agent / ISD Director	Implement requirement	It is standard procedure for all regulatory authorities to require maintenance/inspection reports for regulated projects.	Regulatory authorities to continue to require maintenance / inspection reports for regulated projects.
5E	Submit bylaw to Town Mtg re: BMP's for projects > 1 acre	Planning Director / BOH Agent, Concom Agent / ISD Director / DPW Director	Put forth article to Town Meeting	Planning Director, Conservation Agent, Health Agent, and DPW Director asked for and received funding for FY2019 to develop by-law.	Draft Bylaw for Town Meeting action.

Additional Information:

6. Pollution Prevention and Good Housekeeping in Municipal Operations

BMP ID #	BMP Description	Responsible Dept./Person Name	Measurable Goal(s)	Progress on Goal(s) – Permit Year 15 (Reliance on non-municipal partners indicated, if any)	Planned Activities – Permit Year 16 (if applicable)
6A	Coordinate with CZM to finalize design on Snug Harbor BMP Project	Concom Agent / DPW Director	Obtain final design plans	BMP Completed	None.
6B	Solicit grant from CZM to construct Snug Harbor project	Concom Agent	File for Grant	BMP Completed	None.
6C	Implement Maintenance Schedule for Town-owned BMP's	DPW Director	Distribution of Schedule	BMP's are periodically inspected and completed on a regular basis.	Continued maintenance of Town-owned BMP's.
6D	Sweep Streets	DPW Director / Ops Mgr.	Sweep all streets that outfall to waters of the U.S. eventually	This past year, all Town streets were swept a minimum of one time with business and high traffic areas swept 3 times.	Continued 2x Street Sweeping program.
6E	Clean Catch Basins	DPW Director / Ops Mgr.	Clean CB's that outfall to waters of the U.S. annually	This past year, approximately 124 catch basins were cleaned. The Town has switched to 5:1 salt to sand ratio.	Continue active CB cleaning program.

Additional Item: In 2017, the Town worked with the Plymouth County Mosquito Control Board to remove blockages, brush and other obstructions from ditches and streams off Washington Street to prevent overflows or stagnation.

Annual Evaluation

Year 1 Annual Report

Document Name and/or Web Address:

Year 2 Annual Report

Document Name and/or Web Address:

Year 3 Annual Report

Document Name and/or Web Address:

Year 4 Annual Report

Document Name and/or Web Address:

Year 5 Annual Report

Document Name and/or Web Address:

Year X Annual Report

Document Name and/or Web Address:

APPENDIX

MINIMUM CONTROL MEASURES BMPs

Town of Duxbury, Massachusetts
MA MS4 General Permit - Control Measures
CM #1 - Public Education and Outreach

BMP ID	BMP Categorization	BMP Description	Targeted Audience	Responsible Department/Parties	Measurable Goal	Beginning Year of Implementation
R1	Brochures/Pamphlets	Publish outreach materials; Distribute new resident packets to residents within Wetland Protection Areas.	Residents (1)	DPW, NSRWA	Distribution of a minimum of two (2) educational messages over the permit term (5 years)	2018
R2	Brochures/Pamphlets	Include information in permit materials.	Businesses, Institutions, and Commercial Facilities (2)	DPW, NSRWA	Distribution of a minimum of two (2) educational messages over the permit term (5 years)	2018
R3	Brochures/Pamphlets	Include information in permit materials; Review and Update application forms to meet the new requirements.	Developers (construction) (3)	DPW, NSRWA	Distribution of a minimum of two (2) educational messages over the permit term (5 years)	2018
R4	Brochures/Pamphlets	Distribute information to industrial groups based on zoning and property use.	Industrial Facilities (4)	DPW, NSRWA	Distribution of a minimum of two (2) educational messages over the permit term (5 years)	2018
R5	Web Page	Develop/maintain stormwater website and/or utilize Town social media for outreach. Provide specific information directed towards residences.	Residents (1)	DPW, NSRWA	Update website throughout year	2018
R6	Web Page	Develop/maintain stormwater website and/or utilize Town social media for outreach. Provide specific information directed towards businesses, institutions, and commercial facilities	Businesses, Institutions, and Commercial Facilities (2)	DPW, NSRWA	City stormwater web site is operational and includes section directed toward targeted audience	2018
R7	Web Page	Develop/maintain stormwater website and/or utilize Town social media for outreach. Provide specific information directed towards developers	Developers (construction) (3)	DPW, NSRWA	City stormwater web site is operational and includes section directed toward targeted audience	2018
R8	Web Page	Develop/maintain stormwater website and/or utilize Town social media for outreach. Provide specific information directed towards industrial facilities	Industrial Facilities (4)	DPW, NSRWA	City stormwater web site is operational and includes section directed toward targeted audience	2018
1A	School Curricula/Programs	Water All Around You school educational program	Update Town permit forms	DPW, NSRWA	Annual school participation of program	2018

Town of Duxbury, Massachusetts
MA MS4 General Permit - Control Measures
CM #2 - Public Involvement and Participation

BMP ID	BMP Categorization	BMP Description	Responsible Department/Parties	Measurable Goal	Beginning Year of Implementation
R1	Public Review	SWMP Review	Planning Department	Allow annual review of stormwater management plan and posting of stormwater management plan on website	2018
R2	Public Participation	SWMP Review	Planning Department	Allow public to comment on stormwater management plan annually	2018
1A	Public Participation	Beach Cleanup/Litter Sweep	DPW, Citizen Groups	Continued support of "Duxbury Litter Sweep" community group and coordinating Town-wide cleanup effort	2018
2A	Public Participation	Household hazardous waste/used oil collection	DPW Operations	Continue to sponsor Paint and HHW collections four times per year.	2018

Town of Duxbury, Massachusetts
MA MS4 General Permit - Control Measures

CM #3 - Illicit Discharge Detection and Elimination (IDDE) Program

BMP ID	BMP Categorization	BMP Description	Responsible Department/Parties	Measurable Goal	Beginning Year of Implementation
R1	SSO Inventory	Develop SSO inventory in accordance with permit conditions	DPW Operations	Within 1 year of effective date develop inventory of historical SSOs that occurred within the MS4 in previous 5 Years	2018
R2	Storm Sewer System Map	Create map and update during IDDE program completion	DPW Operations	Update map within 2 years of effective date of permit and complete full system map 10 years after effective date of permit	2018
R3	Written IDDE Program Development	Create written IDDE program	DPW Operations	Complete within 1 year of the effective date of permit	2018
R4	Implement IDDE Program	Implement catchment investigations according to program and permit conditions	DPW Operations	Implement catchment investigations according to program and permit conditions	2018
R5	Employee Training	Train employees on IDDE implementation	DPW Operations	Train annually	2018
R6	Conduct Dry Weather Screening	Conduct in accordance with outfall screening procedure and permit conditions	DPW Operations	Conduct in accordance with outfall screening procedure and permit conditions	2018
R6	Conduct Wet Weather Screening	Conduct in accordance with outfall screening procedure	DPW Operations	Conduct in accordance with outfall screening procedure and permit conditions	2018
R7	Ongoing Screening	Conduct dry weather and wet weather screening as necessary	DPW Operations	Conduct in accordance with outfall screening procedure and permit conditions	2018

Town of Duxbury, Massachusetts
MA MS4 General Permit - Control Measures

CM #4 - Construction Site Stormwater Runoff Control

BMP ID	BMP Categorization	BMP Description	Responsible Department/Parties	Measurable Goal	Beginning Year of Implementation
R1	Site inspection and enforcement of Erosion and Sediment Control (ESC) measures	Complete written procedures of site inspections and enforcement procedures	DPW/Planning/Building/Conservation	Within 1 year of effective date of the permit, develop written/electronic SOP for inspection/enforcement of ESC measures	2018
R2	Site plan review	Complete written procedures of site plan review and begin implementation	DPW/Planning/Building/Conservation	Complete within 1 year of the effective date of the permit	2018
R3	Erosion and Sediment Control	Adoption of requirements for construction operators to implement a sediment and erosion control program	DPW/Planning/Building/Conservation	Complete within 1 year of the effective date of the permit	2018
R4	Waste Control	Adoption of requirements to control wastes, including but not limited to, discarded building materials, concrete truck wash out, chemicals, litter, and sanitary wastes	DPW/Planning/Building/Conservation	Complete within 1 year of the effective date of the permit	2018

Town of Duxbury, Massachusetts
MA MS4 General Permit - Control Measures

CM #5 - Stormwater Management in New Development and Redevelopment

BMP ID	BMP Categorization	BMP Description	Responsible Department/Parties	Measurable Goal	Beginning Year of Implementation
R1	As-built plans for on-site stormwater control	The procedures to require submission of as-built drawings and ensure long term operation and maintenance will be a part of the SWMP	DPW/Planning/Building/Conservation	Require submission of as-built plans for completed projects	2019
R2	Inventory and priority ranking of MS4-owned properties that may be retrofitted with BMPs	Conduct detailed inventory of MS4 owned properties and rank for retrofit potential	Conservation Committee	Complete 4 years after permit effective date	2020
R3	Allow green infrastructure	Develop a report assessing existing local regulations to determine the feasibility of making green infrastructure practices allowable when appropriate site conditions exist	DPW/Planning/Building/Conservation	Complete 4 years after permit effective date	2020
R4	Street design and parking lot guidelines	Develop a report assessing requirements that affect the creation of impervious cover. The assessment will help determine if changes to design standards for streets and parking lots can be modified to support low impact design options	DPW/Planning/Building/Conservation	Complete 4 years after permit effective date	2020
R5	Ensure any stormwater controls or management practices for new development and redevelopment will prevent or minimize impacts to water quality	Adoption, amendment or modification of a regulatory mechanism to meet permits requirements	Planning/Zoning Department	Complete 2 years after permit effective date	2019

Town of Duxbury, Massachusetts
MA MS4 General Permit - Control Measures

CM #6 - Good House Keeping and Pollution Prevention for Permittee Owned Operations

BMP ID	BMP Categorization	BMP Description	Responsible Department/Parties	Measurable Goal	Beginning Year of Implementation
R1	O&M procedures	Create written O&M procedures for parks and open spaces, buildings and facilities, and vehicles and equipment	DPW Operations	Complete within 2 years after permit effective date	2019
R2	Inventory all permittee-owned parks and open spaces, buildings and facilities (including their storm drains), and vehicles and equipment	Create inventory	DPW Operations	Complete 2 years after permit effective date	2019
R3	Infrastructure O&M	Establish and implement program for repair and rehabilitation of MS4 infrastructure	DPW Operations	Complete 2 years after permit effective date	2018
R4	Stormwater Pollution Prevention Plan (SWPPP)	Create Stormwater Pollution Prevention Plan (SWPPP) for maintenance garages, transfer stations and other waste-handling facilities	DPW Operations	Complete 2 years after permit effective date	2019
R5	Catch Basin Cleaning	Establish schedule for catch basin cleaning such that each catch basin is no more than 50% full and clean catch basins on that schedule	DPW Operations	Clean catch basins on established schedule and report number of catch basins cleaned and volume of material moved annually	2018
R6	Street Sweeping Program	Sweep all streets and permittee-owned parking lots in accordance with permit conditions	DPW Operations	Sweep all streets and permittee-owned parking lots once per year in the spring	2018
R7	Road Salt use optimization program	Establish and implement a program to minimize the use of road salt	DPW Operations	Implement salt use optimization during deicing season	2018
R8	Inspections and maintenance of stormwater treatment structures	Establish and implement inspection and maintenance procedures and frequencies	DPW Operations	Inspect and maintain treatment structures at least annually	2018

Town of Duxbury, Massachusetts
MA MS4 General Permit - Water Quality Impairments
Bacteria and Pathogens

BMP ID	BMP Categorization	BMP Description	Targeted Audience	Responsible Department/Parties	Measurable Goal	Beginning Year of Implementation
R1	Public Education and Outreach	Distribute annual message encouraging the proper management of pet waste	Residents	DPW	Annual distribution of educational messages over the permit term (5 years)	2018
		Provide information to owners of septic systems about proper maintenance in any catchment that discharges to a bacteria or pathogen impaired waterbody	Residents	DPW	Provide septic maintenance information to septic contractors to distribute to residents.	2018
R2	Illicit Discharge	Prioritize catchment areas		DPW	Complete within 1 year of the effective date of permit and update as required	2018