

HEARINGS, MEETINGS, LICENSES

10-21-13



Anne McGann <[redacted]>

Edgeway fine

1 message

Anne McGann

Mon, May 6, 2013 at 2:36 PM

To: Charles Cristello <ccristello@middleborough.com>

Hi Charlie, The residents of Edgeway are requesting to be put on the agenda for the purpose of discussing the implementation of the \$100.00 fine for operating without a license, CHAPTER 140: SECTION 32E, page 78.

Thank you, Anne McGann



The Board of Selectmen will hold a public hearing in the Selectmen's Meeting Room at the Town Hall, 10 Nickerson Avenue, Middleborough, MA on Monday, October 21, 2013 at 7:50 PM, for the purpose of discussing an application filed by Horsley Witten Group, Inc. on behalf of Michael Mattos, Affordable Housing & Services Collaborative, Inc., for a Special Permit under the Water Resource Protection District By-law to allow repavement of the existing parking lot and installation of stormwater best management practices (3 rain gardens, 2 vegetated swales) at the Middlebury Arms Apartments, 89 East Grove Street/143 Wood Street, Assessors Map 65, Lot 1067, Zoning District – General Use, WRPD District Z4. Anyone wishing to be heard on this matter should appear at the time and place designated.

Stephen J. McKinnon
Allin Frawley
Ben Quelle
Leilani Dalpe
John M. Knowlton
BOARD OF SELECTMEN

Publish: October 10 and October 17, 2013

Payment forthcoming – Advertiser #300074

MEMORANDUM

TO: Planning Board
Conservation Commission
Robert Whalen, Building Commissioner

FROM: Jackie Shanley
Executive Assistant to the Board of Selectmen

DATE: October 2, 2013

SUBJECT: **W.R.P.D. Application – Michael Mattos, Affordable Housing & Services Collaborative, Inc.
Map 65, Lot 1067**

Attached is a W.R.P.D. application filed by Horsley Witten Group, Inc. on behalf of Michael Mattos, Affordable Housing & Services Collaborative, Inc., for a Special Permit under the Water Resource Protection District By-law.



The Board of Selectmen will hold a public hearing in the Selectmen's Meeting Room at the Town Hall, 10 Nickerson Avenue, Middleborough, MA on Monday, October 21, 2013 at 7:50 PM, for the purpose of discussing an application filed by Horsley Witten Group, Inc. on behalf of Michael Mattos, Affordable Housing & Services Collaborative, Inc., for a Special Permit under the Water Resource Protection District By-law to allow repavement of the existing parking lot and installation of stormwater best management practices (3 rain gardens, 2 vegetated swales) at the Middlebury Arms Apartments, 89 East Grove Street/143 Wood Street, Assessors Map 65, Lot 1067, Zoning District – General Use, WRPD District Z4. Anyone wishing to be heard on this matter should appear at the time and place designated.

Stephen J. McKinnon
Allin Frawley
Ben Quelle
Leilani Dalpe
John M. Knowlton
BOARD OF SELECTMEN

All remarks or concerns regarding the request must be returned to the Selectmen's Office no later than **Wednesday, October 16, 2013 by 12 Noon.**

Thank you.



Town of Middleborough
20 Centre Street, Second Floor
Middleborough, Massachusetts 02346

Robert J. Whalen
Building Commissioner
Tel. 508-946-2426
Fax 508-946-2305

October 15, 2013

Middleborough Board of Selectmen
Middleborough Town Offices
10 Nickerson Ave.
Middleborough, MA 02346

RE: W.R.P.D. Application for 143 Wood Street, Assessors Map 65 Lot 1067.

Honorable Board,

I have reviewed the plans submitted by Horsley Witten Group, Inc. on behalf of Michael Mattos for his request for a W.R.P.D. special permit to allow repavement of the existing parking lot and installation of storm water management at the Middlebury Arms Apartments. The above mentioned property is zoned General Use, W.R.P.D. Z4 and this use would be allowed by special permit.

Respectfully submitted,

Robert J. Whalen
Building Commissioner
Zoning Enforcement Officer

RJW/d



Town of Middleborough

CONSERVATION COMMISSION MEMORANDUM

TO: Board of Selectmen

CC: Ruth Geoffroy, Town Planner
Jeanne Spalding, Health Officer
Robert Whalen, Building Commissioner

FROM: Patricia Cassady, Conservation Agent 

DATE: October 15, 2013

RE: W.R.P.D. Application: 89 East Grove Street/143 Wood Street (Map 65, Lot 1067)

The above-mentioned W.R.P.D application was recently reviewed by the Conservation Commission through a Notice of Intent under DEP File # SE220-1195. The hearing was closed on September 5, 2013 and the Order of Conditions voted on at the October 3, 2013 meeting. The Order of Conditions is to include the Operation & Maintenance Plan and Long Term Pollution Prevention Plan. The Order of Conditions is to be issued soon.

The proposed stormwater management will be a big improvement to the overall water quality coming from the site toward the wetland resource areas. Currently there is no stormwater treatment at all.

If you have any questions regarding this application don't hesitate to contact the Conservation Department at 508-946-2406.

pjc

Jacqueline Shanley

From: Charles Cristello
Sent: Friday, October 18, 2013 7:33 AM
To: Jacqueline Shanley; Rich Tabaczynski
Subject: Fwd: Middlebury Arms
Attachments: RE: Middlebury Arms on Selectman agenda; ATT00001.htm

Thanks for trying Rich see my response to their attorney below

Sent from my iPhone

Begin forwarded message:

From: Charles Cristello <ccristello@middleborough.com>
Date: October 18, 2013 at 7:31:50 AM EDT
To: Robert Mather <RJMather@RJMATHERLAW.COM>
Subject: Fwd: Middlebury Arms

Bob please tell your client that compliance is not optional Charlie

Sent from my iPhone

Begin forwarded message:

From: Rich Tabaczynski <rtaab@atlanticcompanies.com>
Date: October 17, 2013 at 5:10:03 PM EDT
To: 'Charles Cristello' <ccristello@middleborough.com>
Cc: 'Jacqueline Shanley' <jshanley@middleborough.com>
Subject: RE: Middlebury Arms

Charles,
I followed it up with an email to them that outlined the items we talked about. See attached 10/09/13 email to Joe Longo at Horsley Witten. I spoke to him last Thursday and he said he would talk to the owner about the changes. He called today and said the owners don't really want to move the roads, feel they are already improving things, it's an affordable housing project, limited budget, time is an issue, etc. He said they have a local attorney representing them who would be calling you.

Richard J. Tabaczynski, P.E.
Vice President
Atlantic Design Engineers, Inc.
P.O. Box 1051
Sandwich, Massachusetts 02563
P: (508) 888 - 9282
F: (508) 888 - 5859
C: (508) 274 - 1712

-----Original Message-----



September 30, 2013

Board of Selectmen
c/o Mr. Charles J. Christello, Town Manager
Town Hall Building
10 Nickerson Avenue
Middleborough, MA 02346

**Re: *Engineering Review – Middlebury Arms, 89 East Grove St
ADE Job Number 2518.22***

Dear Board Members:

Atlantic Design Engineers, Inc. has completed our initial engineering review of the site plans and application materials for the above referenced project relative to a Special Permit request under the Water Resource Protection District (WRPD) bylaw. The plan is dated 07/29/13 and is prepared by Horsley Witten Group for Peabody Properties of Braintree, MA.

We have the following comments:

1. The WRPD Bylaw does not specifically address redevelopment projects such as this where portions of an existing development, including paved drives and parking areas, are located within the 25 foot No Work Zone. Therefore, the Board may wish to review the project considering the purpose of the WRPD Bylaw, which is, among other things, to protect water resources of the town.
2. Since the project is reducing impervious surface on the site as well as in the 25 foot zone, and is constructing several stormwater treatment facilities to improve the quality of stormwater discharged from the site, it is clearly an improvement over existing conditions and therefore could be considered as meeting the purpose of the WRPD bylaw.
3. Upon review of the plans, we noticed several areas where further improvement could be realized and we are mentioning them for the Board's consideration:
 - Stormwater from a portion of the driveway immediately south of Building D is still directly discharging to the wetland area, with only a stone apron proposed for erosion control. No treatment facilities are proposed in this area. Shifting this portion of the driveway to the north, away from the wetland,



could provide enough room for some sort of stormwater treatment and would provide a better buffer between the pavement and the wetland boundary.

- Since much of the site is to be disturbed during construction of the proposed improvements, the possibility of installing some roof drain infiltration systems could be investigated to increase the recharge of clean rooftop runoff on the site and thereby reduce the amount of runoff to the wetland.

Please call if you have any questions or comments.

Sincerely,

ATLANTIC DESIGN ENGINEERS, INC.

A handwritten signature in black ink, appearing to read 'Richard J. Tabaczynski', is written over the company name.

Richard J. Tabaczynski, P.E.
Project Manager

Horsley Witten Group

Sustainable Environmental Solutions

90 Route 6A • Sandwich, MA • 02563
Phone - 508-833-6600 • Fax - 508-833-3150 • www.horsleywitten.com



Special Permit Application Water Resource Protection District Bylaw

Middlebury Arms
89 East Grove Street
Middleborough, Massachusetts

September 2013



Prepared for:
Affordable Housing and Services Collaborative, Inc.
536 Granite Street
Braintree, MA 02184

Horsley Witten Group

Sustainable Environmental Solutions

90 Route 6A • Sandwich, MA • 02563
Tel: 508-833-6600 • Fax: 508-833-3150 • www.horsleywitten.com



September 6, 2013

Middleborough Board of Selectmen
10 Nickerson Avenue
Middleborough, MA 02346

**Re: Water Resource Protection District Bylaw (Section XII) Special Permit
Middlebury Arms Improvements, 89 East Grove Street/143 Wood Street
Middleborough, Massachusetts (Assessor's Map 65 Lot 1067)**

Dear Board of Selectmen:

On behalf of the Applicant, the Affordable Housing and Services Collaborative, Inc. (AHSC), the Horsley Witten Group, Inc. (HW) is submitting the enclosed Petition for Public Hearing, Water Resource Protection District (WRPD) Application for Special Permit and supporting materials for a series of minor site improvements at the Middlebury Arms residential community in Middleborough, Massachusetts. The proposed project will involve the rehabilitation of the exterior of the buildings, repaving of the existing parking lot, inclusion of American Disability Act (ADA) compliant handicap accessibility, and incorporation of stormwater best management practices.

A portion of the proposed activities will occur within the locally-regulated 25-foot Buffer Zone within a WRPD Z4. This buffer zone is regulated under the WRPD Bylaw (Section XII) and the Town of Middleborough Conservation Commission 2012 Policy. A Notice of Intent (NOI) was filed with the Conservation Commission (DEP File #SE 220-1195) and approved at the September 5, 2013 public hearing. Details of the proposed project are shown on the enclosed site plans and described in the project narrative.

Enclosed please find twelve (12) copies of the applications, supporting documentation, and site plans. The filing fee in the amount of \$50.00 and the legal advertisement fee in the amount of \$143.00 are enclosed. The Applicant will send notification of the pending public hearing to all abutters within 350 feet of the property in accordance with local filing regulations within the required timeframe.

Thank you for your consideration of this application. If you have any questions and/or require additional information pertaining to this submittal, please contact me at (508) 833-6600. We look forward to meeting with you for a public hearing in the following weeks.

Sincerely,

HORSLEY WITTEN GROUP, INC.

A handwritten signature in black ink, appearing to read 'Amanda Crouch-Smith'.

Amanda Crouch-Smith
Environmental Scientist

Enclosures

cc: Michael Mattos, AHSC, Inc.



Town of Middleborough
Massachusetts

RECEIVED
AUG 25 2013

BY:

BOARD OF SELECTMEN
APPLICATION FOR LICENSE (PLEASE TYPE OR PRINT CLEARLY)

DATE August 19, 2013
NAME OF APPLICANT Affordable Housing & Services Collaborative, Inc., c/o Michael Mattos
ADDRESS OF APPLICANT 536 Granite Street, Braintree, MA 02104
ASSESSORS MAP & LOT Map 55 Lot 1067
DAYTIME TELEPHONE (781) 794-1095

NAME OF BUSINESS Middlebury Arms Apartments
OWNER OF PROPERTY TO BE LICENSED Elizabeth Middleborough Realty Trust / O'Toole, Austin et al
ADDRESS OF PROPERTY TO BE LICENSED 43 East Green Street / 143 Wood Street
ASSESSORS MAP & LOT Map 55 Lot 1067

TYPE OF LICENSE REQUESTED (Check One)

- 2nd Hand
- Class I Automobile Dealer License
- Class II Automobile Dealer License
- Class III Automobile Dealer License
- Entertainment
- WRPD
- Earth Removal Permit
- Liquor License
- Junk Dealer
- Other

Anticipated Start Date for Business: Not Applicable Estimated Construction Start Nov-Dec 2013
Days & Hours of Operation: Not Applicable - existing residential development

Has the applicant previously held a similar license in the Town of Middleborough or elsewhere?
If yes, explain:
NO

Signature Michael Mattos

DATE OF HEARING: _____

Please bring to the Treasurer/Collector's office @ the Town Hall Annex, 20 Center Street, 3rd floor to obtain confirmation/signature that no outstanding taxes/municipal charges exist.

Dear Treasurer/Collector:

Please inform this department as to whether or not the above listed property owner/applicant/petitioner owes the Town of Middleborough any outstanding taxes and/or municipal charges that remain unpaid for more than one year.

Does Property Owner/Applicant/Petitioner owe Taxes/Municipal Charges? NO

[Handwritten Signature]

BOARD OF SELECTMEN
MIDDLEBOROUGH, MASSACHUSETTS

PETITION
FOR PUBLIC HEARING

This Petition, when completed and signed, must be filed with the Town Clerk, Town Hall, Middleborough, Massachusetts.

Middleborough, MA August 19 / 2013

To the Board of Selectmen
Middleborough, Massachusetts

I/We hereby petition your Board for a public hearing for a Special Permit which is subject to Board of Selectmen approval under the Water Resource Protection Districts By-law.

A. (Give location of property in question.)

To allow repavement of the existing parking lot and installation of stormwater best management practices (3 rain gardens, 2 vegetated swales) at the Middlebury Arms Apartments, 89 East Grove Street/143 Wood Street, Assessors Map 65 Lot 1067, Zoning District - General Use, WRPD District Z4. The site currently supports four apartment buildings and associated parking.

As shown on the attached plan.

B. State full names and addresses of last known abutting property owners, and the owners of land within 390 feet of the land which is the subject of this petition. Also state the owners of the land immediately across the street from the subject property. Please attach a certified list of these property owners to this petition. Please see attached Certified List of Abutters.

C. Respectfully submitted,

Signature: Michael J. Mattos Michael J. MATTOS

Printed Name: Michael Mattos, Affordable Housing & Services Collaborative, Inc.

Address: 536 Granite Street

Braintree, MA 02184

Telephone Number: (781) 794-1095

TOWN OF MIDDLEBOROUGH
WATER RESOURCE PROTECTION DISTRICT
PETITION SUBMITTAL CHECKOFF SHEET

Applicant must initial each item or the application/petition will not be accepted.

No.	Description	Initial	N/A
1.	The plan has a cover page showing the location of the water supply Zone 2 and 3, with the proposed project site identified.	<u>ACS</u>	<u>ACS</u>
2.	The plan has street location(s), number, buildings and driveway and shows the acreage of the lot in square feet.	<u>ACS</u>	_____
3.	The plan shows existing waterways adjacent, on or near the property.	_____	<u>ACS</u>
4.	The plan is stamped by BOTH a registered Land Surveyor and a Civil Professional Engineer.	_____	_____
	Note: If the site has no approval required other than a home lot then a Land Surveyor stamp will be accepted.	<u>ACS</u>	_____
5.	The plan contains topography, wetland delineations, local storm water discharge points, on site drainage systems and septic systems.	<u>ACS</u>	_____
6.	The plan provides details for work done or proposed for any component outlined in No. 5 (above).	<u>ACS</u>	_____
7.	The submittal contains the abutters list.	<u>ACS</u>	_____
8.	The submittal contains calculations for any proposed on site stormwater retainage, storage tanks and spill containment, on site drainage and recharge.	<u>ACS</u>	_____
9.	The submittal contains a statement that the project has been designed to minimize large scale lot disturbances and has implemented methods to encourage infiltration of site runoff and preservation of groundcover.	<u>ACS</u>	_____
10.	The submittal contains a statement that there will be no removal of soil closer than four (4) feet to the groundwater table, as determined through Title 5 Soil Evaluation methods.	<u>ACS</u>	_____

No.	Description	Initial N/A
11.	The submittal contains a statement that if there is to be storage of hazardous wastes, sludges, deicing chemicals, fertilizers or oil, that appropriate methods have been provided to contain any spillage.	<u>AB</u> _____
12.	The submittal contains a statement that outside stored material will have no impact to the groundwater.	<u>AB</u> _____



RECEIVED
SEP 03 2013

BY:.....

Middleborough Assessor's Office
10 Nickerson Avenue
Middleborough, MA 02346

ABUTTER'S LIST CERTIFICATION PAGE*

Date: August 23, 2013

Board of Selectmen

Board Name for Certification

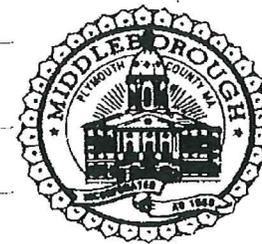
This is a certified abutter's list for 350 feet in every direction including across the street of Map 065 Lot 1067 at 143 Wood Street, Middleborough, MA 02346.

A handwritten signature in cursive script, appearing to read "Ross Lawrence", written over a horizontal line.

Ross Lawrence, Clerk
Middleborough Board of Assessors

(This list consists of 1 page with 25 abutter's lots)

*Please note there is no additional charge for this page and it is intended to certify the information on the preceding or attached document (s).



OWNER NAME	APPLICANT NAME	PAGES
O'Toole, Austin ETAL Trustees C/O Peabody Properties	Affordable Housing & Services Collaborative Inc	1 of 1
NAME OF BOARD	CONTACT #	DATE
Board of Selectmen	Amanda Crouch-Smith 508 833-6600	8/23/2013

<i>Owner name</i>	<i>C/O Owner</i>	<i>Mailing Address</i>	<i>City</i>	<i>State</i>	<i>Zip</i>
TOWN OF MIDDLEBOROUGH		10 NICKERSON AVENUE	MIDDLEBORO	MA	02346
PERRY, A W INC	ATTN: FLAHERTY, MARK J.	20 WINTHROP SQUARE	BOSTON	MA	02110
PERRY, A W INC	ATTN: FLAHERTY, MARK J	20 WINTHROP SQUARE	BOSTON	MA	02110
CAPARROTTA, ERNESTO V TRUSTEE		195 LIBBEY PKY UNIT 2	WEYMOUTH	MA	02189
HILLCREST MHC LLC	C/O MORGAN MANAGEMENT	1170 PITTSFORD VICTOR RD	PITTSFORD	NY	14534
TOPHAM, BRIAN M TRUSTEE		85 EAST GROVE ST	MIDDLEBORO	MA	02346
V S H REALTY INC	C/O CUMBERLAND FARMS INC	100 CROSSING BLVD	FRAMINGHAM	MA	01702
BELL, MICHAEL TRUSTEE		PO BOX 717	MIDDLEBORO	MA	02346
TOMI, LLC	C/O HYLAN AUTO SALES	90 EAST GROVE ST	MIDDLEBORO	MA	02346
WALANTIS, BRENDA J TRST		92 EAST GROVE ST	MIDDLEBORO	MA	02346
MEDEIROS, CRAIG M TRUSTEE		98 EAST GROVE ST	MIDDLEBORO	MA	02346
GAMACHE, LOUISE M TRUSTEE		290 EVERETT ST	MIDDLEBORO	MA	02346
ROBINSON, WILLIAM P & OLGA		20 OLD EAST GROVE ST	MIDDLEBORO	MA	02346
CAMARA, JOSEPH A & HELENA L		40 OLD EAST GROVE ST	MIDDLEBORO	MA	02346
GANGULY, DEBANGSHU K & SOMDUTTA		60 OLD EAST GROVE ST	MIDDLEBORO	MA	02346
SYNNOTT, JOHN JR & DALE		PO BOX 211	MIDDLEBORO	MA	02346
SYNNOTT, JOHN JR		PO BOX 211	MIDDLEBORO	MA	02346
ST MARY'S CEMETERY	C/O SACRED HEART RECTORY	340 CENTER ST	MIDDLEBORO	MA	02346
CHARTIER, MARILYN ETAL TRS		132 WOOD ST	MIDDLEBORO	MA	02346
MARTENSON, ANDERS JR & ANDERS IV		136 WOOD STREET	MIDDLEBORO	MA	02346
LEMMO, SHAWN A	C/O KJM	P O BOX 306	MIDDLEBORO	MA	02346
REBELLO, TAMI K & NICHOLAS		142 WOOD ST	MIDDLEBORO	MA	02346
GAUCHER, CHARLES J		144 WOOD ST	MIDDLEBORO	MA	02346
WALANTIS, TODD TRUSTEE		90 EAST GROVE ST	MIDDLEBORO	MA	02346
SHOGAM, RONALD & ANN		149 WOOD ST	MIDDLEBORO	MA	02346

Property Information

Property ID 065-1067
Location 143 WOOD ST
Owner O'TOOLE, AUSTIN ETAL TRUS
C/O PEABODY PROPERTIES/ B

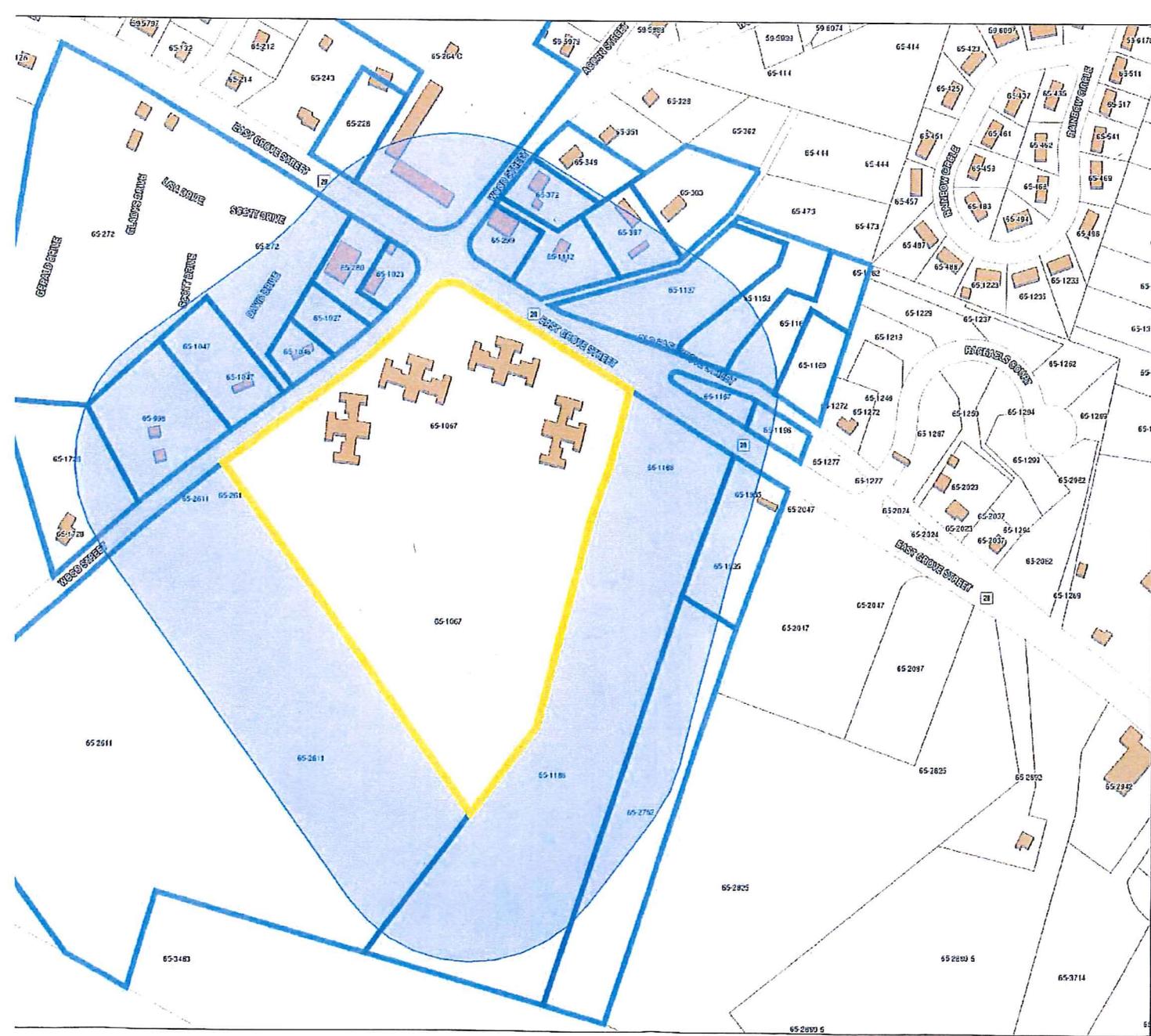
350 ft. Abutters



MAP FOR REFERENCE ONLY
NOT A LEGAL DOCUMENT

The Town makes no claims and no warranties, expressed or implied, concerning the validity or accuracy of the GIS data presented on this map.

Parcels updated 12/31/2011



PROJECT NARRATIVE

WATER RESOURCE PROTECTION DISTRICT SPECIAL PERMIT

Project Narrative

Middlebury Arms

89 East Grove Street/143 Wood Street

Middleborough, Massachusetts

SUMMARY

The Applicant, the Affordable Housing and Services Collaborative, Inc. (AHSC), proposes a series of site improvements to the existing apartment complex at Middlebury Arms in Middleborough, Massachusetts. The proposed project will involve the rehabilitation of the exteriors of the buildings (e.g., replacement of siding), repaving of the existing parking lot to provide American Disability Act (ADA) compliant handicap accessibility, and incorporation of stormwater best management practices. Reconstruction of the parking will reduce the overall amount of impervious cover. A small portion of the proposed parking lot improvements and stormwater facilities will occur within the locally-regulated 25-foot buffer zone to a Bordering Vegetated Wetland. This buffer zone is regulated under the Water Resource Protection District Bylaw (Section XII) and the Town of Middleborough Conservation Commission 2012 Policy. An erosion and sedimentation control barrier will be used to protect downgradient resource areas, and construction-related impacts will be minimized and restored upon completion of the project.

1.0 SITE DESCRIPTION

The project is located at the Middlebury Arms residential housing development at 89 East Grove Street in Middleborough, Massachusetts (Figures 1 and 2). Middlebury Arms is a 14.69-acre property and supports four residential apartment buildings. Residential parking lots are located to the south of the buildings, adjacent to the existing tree line and are accessed via 143 Wood Street and 89 East Grove Street (Route 28). A series of paved footpaths traverse the site, and provide access between the parking areas and the residential buildings. A small playground and basketball court are located to the southwest of the existing parking lot that is off of East Grove Street. Undeveloped forested upland and wetlands comprise the southern half of the parcel. A cemetery neighbors the property to the west, and surrounding areas to the north, east and west are primarily residential. Some commercial properties and a gas station are located on the opposite site of Wood Street, at the East Grove Street intersection.

1.1 Water Resource Protection District

The project site falls within Water Resource Protection District (WRPD) Z4, according to the *Middleborough, Massachusetts Zoning Map* (Figure 3A). This WRPD zone is defined as “*the remaining land within the Town outside of WRPD Z1, Z2, AND Z3.*” Existing water resources protection areas within the vicinity of the site are presented on Figure 3B.

1.2 Zoning Designation

The site is located in a “General Use” (GU) zoning district which typically requires a special permit from the Zoning Board of Appeals for Multi-Family development. However, Middlebury Arms (the site) is an occupied 64-unit multi-family development built in 1974, and the proposed occupied renovations of Middlebury Arms will not change or alter the use or structures of the site. Therefore, the site is deemed to be a lawfully existing non-conforming use and structure per local zoning regulations.

1.3 Floodzone

According to the FEMA Flood Insurance Rate Map (Community Panel No. 2502750025C), the site is located entirely within Zone X, *areas outside of the 100-year and 500-year flood* (Figure 4).

1.3 Rare Species Habitat

According to the *Massachusetts Natural Heritage Atlas* (Massachusetts Natural Heritage & Endangered Species Program (13th Edition, October 1, 2008), the southern half of the parcel (i.e., south of the existing parking area) is located within *Estimated Habitat of Rare Wildlife and Certified Vernal Pools* (EH 77) and *Priority Habitat of Rare Species* (PH 13; Figure 5). A Massachusetts *Endangered Species Act* (M.G.L. Ch. 131A) or “MESA” Review for this project has been submitted jointly with the Notice of Intent (NOI). While the proposed project occurs within both Estimated and Priority habitats of State-listed species, this project qualifies for an exemption from MESA Review in accordance with 321 CMR 10.14(8) and 321 CMR 10.14(12), as the proposed project involves “*construction of new stormwater management systems that are designed to improve stormwater management at previously developed sites...*” and “*the maintenance, repair or replacement, but not widening, of existing paved roads, shoulder repair that does not exceed four feet from an existing travel lane, paved and unpaved driveways and paved and unpaved parking areas,*” respectively.

NHESP has confirmed the exemption status for this project (NHESP Tracking No.: 13-32460) and a MESA Project Review will not be required.

2.0 WETLAND RESOURCE AREAS

Wetland resource areas were identified by Horsley Witten Group, Inc. (HW) on August 10, 2011. Wetland resource areas identified on or adjacent to the site are limited to Bordering Vegetated Wetland (BVW). A NOI was filed with the Middleborough Conservation Commission on July 25, 2013 and approved on September 5, 2013. An Order of Conditions (OOC) is anticipated to be issued in September 2013 (DEP File #SE 220-1195). A brief description of this resource area is provided below.

2.1 Bordering Vegetated Wetland/Vegetated Wetlands

BVW is defined under Massachusetts Wetlands Protection Act Regulations at 310 CMR 10.55(2)(a) as “freshwater wetlands that border on creeks, rivers, streams, ponds and lakes. The types of freshwater wetlands are wet meadows, marshes, swamps and bogs. Bordering Vegetated Wetlands are areas where the soils are saturated and/or inundated such that they support a predominance of wetland indicator plants. The boundary of Bordering Vegetated Wetland is defined at 310 CMR 10.55 (2)(c) as the line within which 50% or more of the vegetational community consists of wetland indicator plants and saturated or inundated conditions exist.”

Flag Series HW-1 through HW-30

An area of BVW is located throughout the southern half of the parcel. The boundary of this wetland roughly coincides with the treeline and edge of filled land associated with the Middlebury Arms development and parking lots. This bordering vegetated wetland is likely associated with a larger forested swamp farther south. This wetland is best characterized as a forested red maple (*Acer rubrum*) swamp surrounded by eastern white pine (*Pinus strobus*) uplands. Small pockets of standing water were also observed intermittently within this wetland area.

The forest canopy within these areas is dominated by red maple with occasional black cherry (*Prunus serotina*). Shrub species observed include arrowwood (*Viburnum dentatum*), multiflora rose (*Rosa multiflora*), red maple, and honeysuckle (*Lonicera* spp.). Groundcover species include clumps of skunk cabbage (*Symplocarpus foetidus*), cinnamon fern (*Osmunda cinnamomea*), sensitive fern (*Onoclea sensibilis*), jewelweed (*Impatiens capensis*), royal fern (*Osmunda regalis*), poison ivy (*Toxicodendron radicans*), Canada mayflower (*Maianthemum canadense*), and various sedges (*Carex* spp.). Occasional entanglements of common greenbrier (*Smilax rotundifolia*) and Oriental bittersweet (*Celastrus orbiculatus*) were also observed. This wetland was delineated with pink surveyor’s flagging, sequentially numbered HW-1 through HW-30.

3.0 PROPOSED PROJECT

The proposed project will involve the rehabilitation of the exteriors of the four apartment buildings, including replacing the siding and cleaning or replacement of downspouts and gutters and improvements to exterior lighting. Another central element of the site improvements is to provide consistent American Disability Act (ADA) compliant handicap access throughout the property. Access ramps will be installed at a number of the building entrances and the existing internal paved footpaths will be regraded and repaved, to provide walkway configurations, elevations, and slope inclines compliant with ADA accessibility specifications.

The two existing parking lots accessed from Wood Street and East Grove Street will be repaved. Redevelopment of the parking will occur entirely within the footprint of the existing lot. Existing pavement will be improved and the lot will be regraded to direct stormwater to the proposed stormwater treatment facilities. Once the area is regraded, the lot will be repaved

within the same footprint of the existing paved area. Two vegetated stormwater swales will be constructed, along each of the entry drives off Wood Street and East Grove Street and will capture, pre-treat and convey stormwater to the biofilters. Three biofilter (i.e., vegetated stormwater basins or raingardens) will be constructed to provide stormwater treatment upgradient of the wetland areas, which is not currently provided at Middlebury Arms. One biofilter area will be installed along the southeast edge of the west parking lot that is accessed from Wood Street. The remaining two biofilters will be constructed along the southern edge of the eastern parking lot that is accessed from East Grove Street; one will be constructed at the southeast corner where the entry drive joins the parking lot and the second will be located near the southwest corner between the parking lot and the basketball court and playground.

Approximately 17,800 square feet (SF) of work will occur within the 25-foot buffer zone regulated by the WRPD Bylaw. Work within the 25-foot buffer will fall entirely within previously disturbed areas. None of the proposed activities are defined as Prohibited Uses as outlined in Section H(2) of the WRPD Bylaw. The project has been designed to minimize large scale lot disturbance and has implemented methods to encourage infiltration of site runoff and preservation of groundcover. There will be no storage of hazardous wastes, sludges, deicing chemicals, fertilizers, or oil within the project area and appropriate methods have been provided to contain any spillage. Outside stored material will have no impact to the groundwater. Removal of existing topsoil from within the biofilter basin footprints may be required within four feet to the groundwater table, in order for the biofilter basins underdrain to be properly constructed.

Details of the proposed project are provided on the enclosed site plans prepared by Horsley Witten Group, Inc., entitled "*Middlebury Arms Improvements, 89 East Grove Street, Middleborough, Massachusetts,*" (dated July 29, 2013). Of note, the proposed project meets the definition of redevelopment under the Massachusetts Stormwater Management Standards, a discussion of which is provided in Section 5 and 6 of this narrative.

4.0 WRPD Z4 USE REGULATIONS & RESOURCE AREA PROTECTION

As noted above, some land disturbing activities (17,800 SF) will occur within the 25-foot buffer zone to BVW within the WRPD Z4 and will require a Special Permit from the Special Permit Granting Authority (SPGA), in accordance with Section H(3) of the Bylaw. A discussion of how the proposed project is designed to meet the Use Regulations under the Water Resource Protection District Bylaw (Section XII) to the maximum extent practicable follows.

4.1 25-Foot Buffer Zone

Portions of the proposed activities will occur within the 25-foot buffer to BVW, as regulated in Section H(3)(d) of the WRPD Bylaw, which states "*there shall be no building, structure, or land disturbing activity within twenty-five (25) feet of a "fresh water wetland" as defined by MGL Ch. 131 Section 40 – Massachusetts Wetland Protection Act or as a "wetland" as defined by 33CFR 328.3 AND 40 CFR 230.3, the regulation promulgated under Section 404 of the Federal Clean Water Act.*" Although such uses or activities within the 25-foot buffer are prohibited, they may

be permitted upon the issuance of a Special Permit by the Special Permit Granting Authority (SPGA).”

The existing 25-foot buffer south of Middlebury Arms is currently disturbed/degraded and consists of lawn, fencing, parking lots, a basketball court, and a playground. As a small portion of the proposed site improvements will occur within the 25-foot buffer, the Applicant requests relief from the SPGA for work within this area under a Special Permit, since all work within the 25-foot buffer would occur within previously disturbed areas that are currently comprised of impervious surfaces, structures, and lawn. These activities must be sited in the proposed location to serve the purpose and need of the project, repaving the deteriorated parking lot and installing stormwater management practices. The project has been designed to avoid disturbance of soils, topography, drainage, vegetation, and other water-related natural features of the site.

As previously mentioned, the project will provide stormwater management in the form of biofilter that will improve the functions and values of the buffer zones and downgradient wetlands that are currently subject to overland stormwater flows as well as stormwater-related sedimentation and erosion. The stormwater management practices will capture, treat, attenuate, and infiltrate stormwater runoff at Middlebury Arms and will minimize overland flow through the buffer areas and into the wetland. This will increase the rate of recharge on site, in accordance with Section I(4)(j) of the WRPD Bylaw. The proposed project is not anticipated to adversely affect the existing or potential quality or quantity of water that is available in the Water Resource Protection Districts or otherwise impact the water resources of the Town. Rather, this project will ultimately improve local surface and groundwater quality of the area and adjacent wetlands and the larger systems into which they flow through the treatment stormwater, serving the interests of Section I(4)(h) and (6)(a) through (d) and promoting the purposes of the WRPD Bylaw.

4.2 Sedimentation and Erosion Control

The Applicant proposes to protect the downgradient resource areas by implementing a sedimentation and erosion control program during construction. A sediment and erosion control barrier consisting of siltation sock will be placed at the limit of work and/or as shown in the project plans. Erosion control barriers will remain in place and will be maintained in good condition until all work is complete and all soils have been stabilized.

5.0 STORMWATER MANAGEMENT

The proposed project meets the definition of redevelopment under the Massachusetts Stormwater Management Standards. With respect to meeting the Stormwater Standards, we offer the following responses:

Standard 1. No new stormwater conveyances (e.g. outfalls) may discharge untreated stormwater directly to or cause erosion in wetlands or waters of the Commonwealth.

Project is a redevelopment of existing parking, recreation and pedestrian walkways that will reduce overall impervious area within the property. Under existing conditions untreated

stormwater is discharged to the adjacent wetland resource area. Proposed improvements include linear surface biofilter along the parking lot to collect and treat runoff from the development prior to discharge to the wetlands. The biofilters are equipped with stone overflow structures to protect against eroding within the adjacent wetlands.

Standard 2. Stormwater management systems shall be designed so that post-development peak discharge rates do not exceed pre-development peak discharge rates. This Standard may be waived for discharges to land subject to coastal storm flowage as defined in 310 CMR 10.04.

Post rates will be less than pre-developments rate due to a reduction of site impervious area from the re-alignment of the parking lot and the runoff attenuation that will be provided by the biofilters shown in the Plans.

Standard 3. Loss of annual recharge to groundwater shall be eliminated or minimized through the use of infiltration measures including environmentally sensitive site design, low impact development techniques, stormwater best management practices, and good operation and maintenance. At a minimum, the annual recharge from the post-development site shall approximate the annual recharge from pre-development conditions based on soil type. This Standard is met when the stormwater management system is designed to infiltrate the required recharge volume as determined in accordance with the Massachusetts Stormwater Handbook.

Recharge in post-development will be equal or greater than pre-development conditions with the addition of the biofilters, which have been sized for the 1-inch rainfall event.

Standard 4. Stormwater management systems shall be designed to remove 80% of the average annual post-construction load of Total Suspended Solids (TSS). This Standard is met when:

- *Suitable practices for source control and pollution prevention are identified in a long-term pollution prevention plan, and thereafter are implemented and maintained;*
- *Structural stormwater best management practices are sized to capture the required water quality volume determined in accordance with the Massachusetts Stormwater Handbook; and*
- *Pretreatment is provided in accordance with the Massachusetts Stormwater Handbook.*

The project satisfies all three of the above requirements. Source controls and pollution prevention will be controlled by the methods outlined in the Stormwater Operation and Maintenance Plan. The stormwater management treatment system for the site has been selected and sized to equal or exceed the required 80% average annual load of TSS, as follows:

Biofilters: Recommended design rate: 90%

Standard 5. For land uses with higher potential pollutant loads, source control and pollution prevention shall be implemented in accordance with the Massachusetts Stormwater Handbook to eliminate or reduce the discharge of stormwater runoff from such land uses to the maximum extent practicable. If through source control and/or pollution prevention all land uses with higher potential pollutant loads cannot be completely protected from exposure to rain, snow, snow melt, and stormwater runoff, the proponent shall use the specific structural stormwater

BMPs determined by the Department to be suitable for such uses as provided in the Massachusetts Stormwater Handbook. Stormwater discharges from land uses with higher potential pollutant loads shall also comply with the requirements of the Massachusetts Clean Waters Act, M.G.L. c. 21, §§ 26-53 and the regulations promulgated thereunder at 314 CMR 3.00, 314 CMR 4.00 and 314 CMR 5.00.

Not applicable. No area on the proposed site has been designated as a land use with higher potential pollutant loads.

Standard 6. Stormwater discharges within the Zone II or Interim Wellhead Protection Area of a public water supply, and stormwater discharges near or to any other critical area, require the use of the specific source control and pollution prevention measures and the specific structural stormwater best management practices determined by the Department to be suitable for managing discharges to such areas, as provided in the Massachusetts Stormwater Handbook. A discharge is near a critical area if there is a strong likelihood of a significant impact occurring to said area, taking into account site-specific factors. Stormwater discharges to Outstanding Resource Waters and Special Resource Waters shall be removed and set back from the receiving water or wetland and receive the highest and best practical method of treatment. A "storm water discharge" as defined in 314 CMR 3.04(2)(a)1 or (b) to an Outstanding Resource Water or Special Resource Water shall comply with 314 CMR 3.00 and 314 CMR 4.00. Stormwater discharges to a Zone I or Zone A are prohibited unless essential to the operation of a public water supply.

Not applicable. The site is not within a Zone II wellhead protection recharge area for public water supply or any of the State designated critical areas listed above.

Standard 7. A redevelopment project is required to meet the following Stormwater Management Standards only to the maximum extent practicable: Standard 2, Standard 3, and the pretreatment and structural best management practice requirements of Standards 4, 5, and 6. Existing stormwater discharges shall comply with Standard 1 only to the maximum extent practicable. A redevelopment project shall also comply with all other requirements of the Stormwater Management Standards and improve existing conditions.

The project is a redevelopment that included improvements to vehicle and pedestrian access within the property. The proposed stormwater management system will provide improvements to current site conditions.

Standard 8. A plan to control construction-related impacts including erosion, sedimentation and other pollutant sources during construction and land disturbance activities (construction period erosion, sedimentation, and pollution prevention plan) shall be developed and implemented.

The erosion and sediment control devices that will be implemented during construction of the project are shown on the site plans. They include siltation socks or silt fence adjacent to all resource areas and inlet protection over all existing catchbasins/drainage inlets that accept stormwater runoff from the project area. Details are provided on the site plans. Total disturbance will be greater than or equal to the National Pollutant Discharge Elimination System

(NPDES) threshold of 1-acre and therefore a Stormwater Pollution Prevention Plans (SWPPP) will need to be prepared by the Owner prior to construction.

Standard 9. A long-term operation and maintenance plan shall be developed and implemented to ensure that stormwater management systems function as designed.

An operations and maintenance plan will be implemented by the Owner and/or Site Operator. Section 6.0 includes information on Post Construction Operation and Maintenance requirements.

Standard 10. All illicit discharges to the stormwater management system are prohibited.

There will be no illicit discharges to any resource area or stormwater management system/structure as part of this project.

6.0 POST CONSTRUCTION OPERATION AND MAINTENANCE

In conformance with Standard 9 of the Stormwater Standards we offer the following information for Post Construction Operation and Maintenance of the stormwater system associated with the proposed improvements.

6.1 Responsible Parties

Stormwater Management System Owner:
Affordable Housing and Services Collaborative, Inc.
Contact: Michael J. Mattos, Executive Director
536 Granite Street
Braintree, MA 02184
Phone: (781) 794-1095
Fax: (781) 794-1001

Party Responsible for Operation and Maintenance:
Affordable Housing and Services Collaborative, Inc.
Contact: Michael J. Mattos, Executive Director
536 Granite Street
Braintree, MA 02184
Phone: (781) 794-1095
Fax: (781) 794-1001

6.2 General Maintenance Tasks

Mowing Outside Resource Areas – Herbaceous material along the shoulder of the stormwater management facilities shall be mowed a minimum of four times per year or as necessary. Extent of mowing is intended to accommodate access for maintenance of the stormwater facilities.

Bituminous Asphalt or Concrete Pavement – Repair surface with patching as necessary. Inspect and document heaving and any cracking. Repair concrete and seal pavement as necessary. Full pavement replacement shall be conducted every 10-20 years or as determined necessary due to field conditions.

Curbing, Stone/Rock, Walls, and Riprap Stone – Inspection shall be annually. Remove and replace as necessary.

Pet Waste Management – Residents and visitors shall be encouraged to pick up after their pets with signage along lawn areas. Waste shall be collected if found during other maintenance.

Solid Waste Management – Solid waste will be managed in enclosed dumpsters.

Snow Management/Removal Plan – Plowed snow will be deposited onto available pervious locations, and where available shall be directed to stormwater management systems for treatment. Plowing and sidewalk salting shall be conducted to provide safe pedestrian access. Salt or de-icing agents shall not be permitted in resource areas or resource area buffer zones.

Pavement Sweeping Schedules – Surfaces shall be swept annually after spring snowmelt.

Litter/Trash Collection – Litter a trash collection from the property shall be conducted bi-annually or as required during other operation activity.

Soil/Surface Erosion Management – Soil erosion shall be monitored and remediated as necessary. Soil washout into adjacent properties and/or resource areas shall be removed and surface shall be re-established.

Graffiti Control – Graffiti shall be reported to the Police Department and removed by environmentally safe detergent and water or repainted as necessary.

Vandalism – Vandalism shall be reported to the Police Department and repaired as necessary.

6.3 Stormwater Maintenance Tasks

All stormwater management and controls shall be operated and maintained appropriately during regular operation of the site in the post-construction period. The stormwater control system shall be regularly inspected to ensure proper performance. In general, the following operation and maintenance provisions shall be provided:

- All stormwater management systems shall be cleared of accumulated foreign debris, including leaves and lawn cuttings;
- All stormwater management systems shall be inspected for slope integrity and erosion where applicable;
- The snow removal plan shall be adhered to by the Owner;
- A maintenance inspection report shall be made after each inspection. A copy of the form to be completed by the inspector is attached;

- All measures shall be maintained in good working order, if a repair is necessary, it shall be initiated within 48 hours of discovery; and
- All sediment and debris materials shall be disposed of properly in a pre-approved off-site location.

The stormwater controls shall be inspected on a routine basis to prevent deficiencies in the effectiveness of the systems due to sediment build-up, damage, or deterioration. Stormwater controls shall be operated and maintained appropriately during regular operation of the site in the post-construction period.

Biofiltration Areas

The biofiltration areas (also referred to as a “rain garden” or a “bioretention”) is a stormwater management practice to manage and treat stormwater runoff using a conditioned planting soil bed and planting materials to filter runoff stored within a shallow depression. The method combines physical filtering and adsorption with bio-geochemical processes to remove pollutants. The system consists of an inflow component, a pretreatment element, an overflow structure, a shallow ponding area (less than nine inches deep), a surface organic layer of mulch, a planting soil bed, and plant materials.

The maintenance objective for this practice includes maintaining the hydraulic and removal efficiency of the biofiltration system and maintaining a dense, healthy vegetative cover. The following activities are recommended on an annual basis or as needed:

- Vegetation management;
- Litter and debris removal; and
- Stabilization of eroded side slopes and bottom (replace lost soil and re-seed).

During the six months immediately after construction, biofiltration areas should be inspected at least twice or more following precipitation events of at least 1.0 inch to ensure that the system is functioning properly. Thereafter, inspections shall be conducted on an annual basis and after storm events of greater than or equal to the 1-year, 24-hour (Type III) precipitation event.

Both the vegetative and structural components should be inspected and repaired. General maintenance of the biofilters falls under landscaping practices. The planting soil bed will be monitored for proper pH, erosion, and aeration. When sediment accumulates to a depth of one (1) inch over the filter bed it should be removed and disposed of properly in a pre-approved off-site location. If the surface of biofiltration area becomes clogged to the point that standing water is observed on the surface 48 hours after precipitation events, the top three inches of discolored material shall be removed and replaced with fresh material. Ill-established, dead, or severely diseased plants will be removed and replaced as needed. All barren areas within the extents of the facility shall be replenished and re-vegetated to the original design standards. If applicable, the grasses in the biofilter should be cut at least two (2) times during the growing season or as required to maintain grass heights less than 12 inches. Trash and debris should be removed and properly disposed. During inspection, any structural components of the system, including weir walls, drainage inlets, trash racks, valves, pipes, and spillway structures, should be checked for

proper function. Any clogged openings should be cleaned out and repairs should be made where necessary.

Sediment build-up at the riprap inlet locations will be removed as needed. Sediment removal in the sediment forebay area shall take place when the 50% of the forebay capacity has been reached, or every 5 years, whichever occurs first. The overflow spillways will be repaired or replaced when necessary. Riprap at the inlet and/or outlet locations will be inspected annually and repaired as necessary.

Herbaceous vegetation root stock shall be pruned when overcrowding is observed, or approximately once every three (3) years. If at least 50 percent vegetation coverage is not established after two (2) years, a reinforcement planting should be performed. The embankments should be checked for stability and any burrowing animals should be removed. Any minor soil erosions gullies should be repaired when they occur.

Vegetated Swales and Channels

Vegetated swales are concave conveyance systems that can improve water quality through infiltration and filtering. In moderately sloped areas they can retain and treat stormwater runoff. Vegetated swales are appropriate in areas where standing water is not desirable such as residential, commercial, industrial areas and highway medians. The swales include a prepared soil bed designed to filter the runoff for water quality. Runoff is typically surface conveyed or collected in an underdrain system and discharged to a downstream drainage system. The design objective for vegetated swales is to drain down within twenty-four hours of a storm event, which is similar to a biofiltration system; except that the pollutant removal is likely to be more limited, since only a grass cover crop is available for nutrient uptake. Vegetated swales are typically constructed with slopes ranging from 0.5% (min.) to 2% (max.).

The maintenance objective for this practice includes maintaining the hydraulic and removal efficiency of the channel and maintaining a dense, healthy grass cover. The following activities are recommended on an annual basis or as needed:

- Mowing and litter and debris removal;
- Stabilization of eroded side slopes and bottom (replace lost soil and re-seed); and
- Discing or aeration of channel bottom.

Grass channels should be inspected on an annual basis or more frequently as needed. Both the vegetative and structural components should be inspected and repaired. When sediment accumulates to a depth of one-quarter ($\frac{1}{4}$) of the original design depth, it should be removed, and the channel should be reconfigured to its original dimensions. Sediment will be disposed of properly in a pre-approved off-site location. The grass in the grass channel should be mowed at least four (4) times during the growing season or as required to maintain grass heights in the 4-6 inch range. Mandatory mowing shall occur once grass heights exceed 10 inches. Trash and debris should be removed and properly disposed. During inspection, any structural components of the system, including trash racks, valves, pipes, and spillway structures, should be checked for

proper function. Any clogged openings should be cleaned out and repairs should be made where necessary.

Every five years, scraping of the channel bottom and removal of sediment to restore original cross section and infiltration rate, and re-seeding or sodding to restore ground cover are recommended.

Stone Check Dams, Riprap Forebays and Outfalls

Stone check dams, riprap forebays and outfalls shall be inspected annually. Remove any sediment and debris found during inspection. Replace stone and repair surface erosion as necessary.

Stone sediment forebays and outfalls will be inspected on an annual basis and just after storms greater than or equal to the 1-yr, 24-hour (Type III) storm event. Sediment shall be cleaned out of the areas when it accumulates to a depth of more than one-half ($\frac{1}{2}$) the design depth. Sediment will be disposed of properly in a pre-approved off-site location. Vegetation within the areas shall be limited to a height of 18 inches and will be removed if impacting functionality. Any riprap inlet and/or outlet spillways will be repaired or replaced when necessary. Trash and debris shall be removed as necessary.

6.4 Estimated Operation and Maintenance Budget

The estimated average annual operating and maintenance budget for the project is as follows:

<i>General Maintenance</i>	\$500 (lump sum estimate)
Biofiltration Areas/Infiltration Basins (3):	\$3,000 (\$1,000/basin)
<i>Grass Channels/Sediment Forebays (1):</i>	\$500 (\$500/location)
<i>Stone Forebays and Outfalls</i>	\$500 (lump sum estimate)
<hr/>	
<i>Estimated Total Annual Maintenance Cost:</i>	\$4,500

6.5 Operation and Maintenance Log Form

Operation and maintenance log form is provided below:

Operation and Maintenance Checklist

Middlebury Arms

89 East Grove Street, Middleborough MA

Date:

Time:

Inspector:

	Description	Maintenance Required? (Y/N)
1. Biofiltration Facility - Inspect annually and after major storms		
Sediment Removal	Remove sediment from the filter bed when sediment buildup is >1".	
Side Slopes and Surface	Repair any soil gullyng and revegetate/ replenish topsoil on barren areas as necessary.	
Inlet/Outlet Structures & Spillways	Repair or replace riprap as necessary. Remove sediment as needed. Remove trash and debris.	
Mulch	Remove and replenish mulch layer every other year to original design depth. If mulch becomes clogged with sediment, excavate clogged area down to soil media and replenish.	
Vegetation Replacement	Confirmation of plant materials by landscape professional. Replace dead or dying vegetation as necessary.	
Pruning	Prune for sight visibility as necessary. Separation of herbaceous vegetation root stock is necessary when over-crowding is observed (1x/3yrs).	
Infiltration Capacity Maintenance	If standing water is observed 48 hrs after a storm event, the top 3" shall be roto-tilled to break up hard-packed soil and then revegetated.	
Mowing	Cut grasses up to twice annually to maintain grass heights less than 12 inches.	
2. Grass Channel - Inspect annually and after major storms		
Sediment Removal	Remove sediment from riprap inlets and basins when sediment buildup is ¼ of the design depth.	
Side Slopes and Surface	Repair any soil gullyng and revegetate/ replenish topsoil on barren areas as necessary.	

	Description	Maintenance Required? (Y/N)
Inlet/Outlet Structures & Spillways	Repair or replace riprap as necessary. Remove sediment as needed. Remove trash and debris.	
Mowing	Mow grass four times annually to maintain grass heights in the 4-6 inch range.	
3. Sediment Forebay and Outfalls - Inspect annually and after major storms		
Sediment Removal	Remove sediment from the area when sediment buildup is ½ of the design depth.	
Vegetation Maintenance	Limit the height of vegetation within the area to a maximum of 18 inches.	
Inlet/Outlet Structures & Spillways	Repair or replace riprap as necessary. Remove sediment as needed. Remove trash and debris.	
4. Routine Maintenance – Perform annually		
Debris Removal	Remove trash from paved and perimeter areas.	
Pavement Sweeping	Sweep pavement after spring thaw.	
Drainage Network	Ensure proper operation.	

Comments:

Actions to be taken:

Project: Middlebury Arms Project No: 11075
 Project Location: Middleboro
 Calculated By: JLL
 Checked By: JEL
 Date: 11/2/2011

Instructions: Enter values in the cells only. All other cells are formulas or links and do not need to be edited. See cell comments for descriptions and formulas used.

Bioretention Sizing Calculations

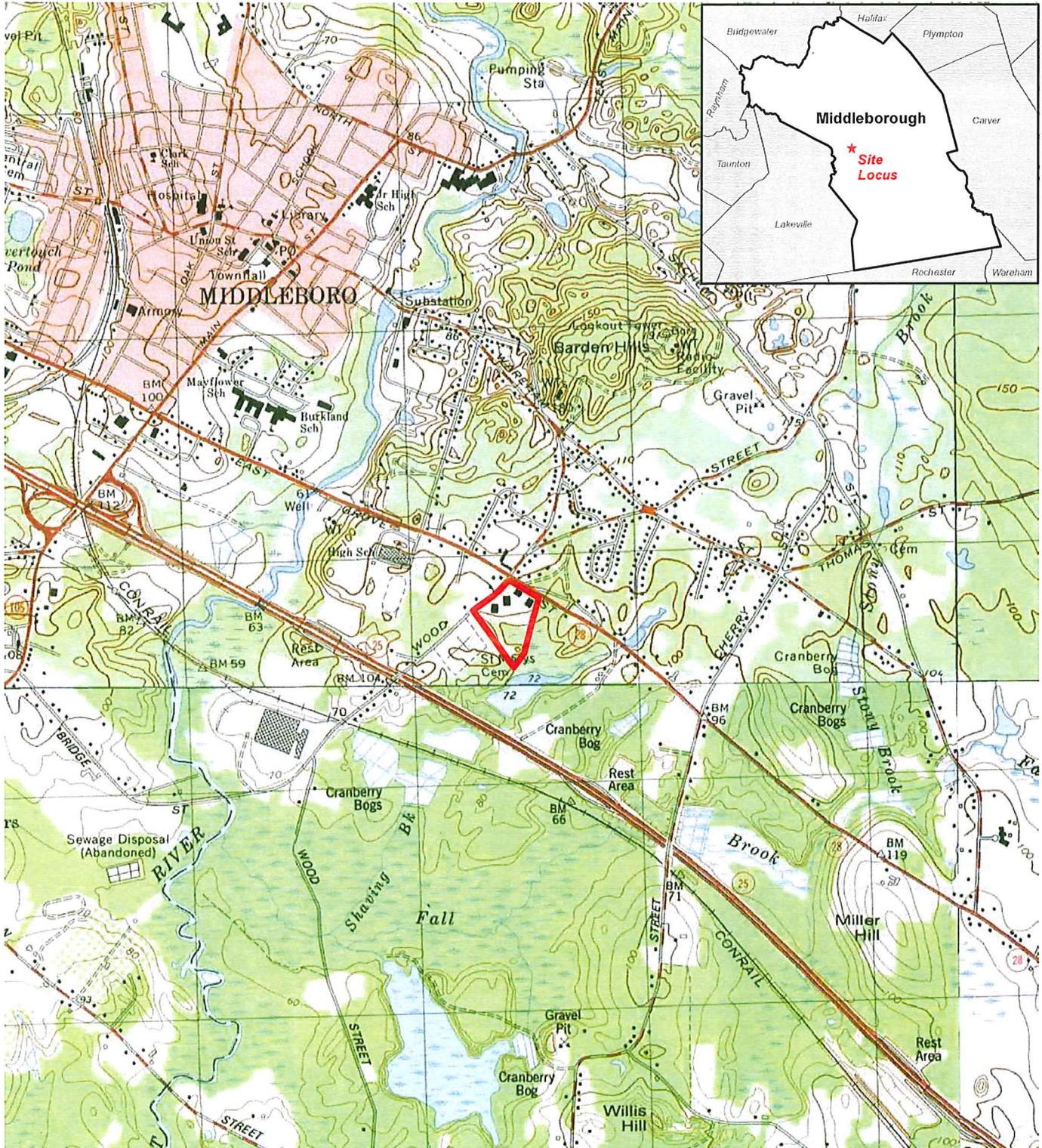
Storm Type: 1 Inch

Sizing Equations: Bioretention based upon 1-inch of rainfall times the contributing impervious area
 Required Surface Area (sf) = (WQv) (df) / [(k) (hf + c) contributing impervious area]
 Where: df = Filter bed depth (ft) k = Coefficient of permeability of filter media (ft/day)
 hf = Ave. height of water above filter bed (ft) tf = Design filter bed drain time (days)

BIORETENTION SIZING:

Bio Area	Drainage Area Name	Total Area (sf)	% Impervious	Impervious Area (sf)	Impervious Area (acres)	Treatment Storm (inches)	Treatment Storm (ft)	WQV (cf)	df (ft)	K (ft/day)	hmax-Height of water above filter (in.)	hf=avg of above (ft)	tf (days)	Surface Area Required (sf)	Surface Area Provided (sf)
1	DA3	59,155	38	22,304	0.51	1	0.083	1859	1.00	3	6	0.25	1	496	550
2	DA5	64,644	24	15,447	0.35	1	0.083	1287	1.00	3	6	0.25	1	343	630
3	DA6	93,359	33	30,621	0.70	1	0.083	2552	1.00	3	6	0.25	1	680	830

FIGURES



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Legend

 Site Locus

*Bridgewater & Assawampset Pond Topographic Quadrangles

Horsley Witten Group
Sustainable Environmental Solutions

80 Route 6A • Sandwich, MA • 02553
Tel: 508-833-6600 • Fax: 508-833-3150 • www.horsleywitten.com

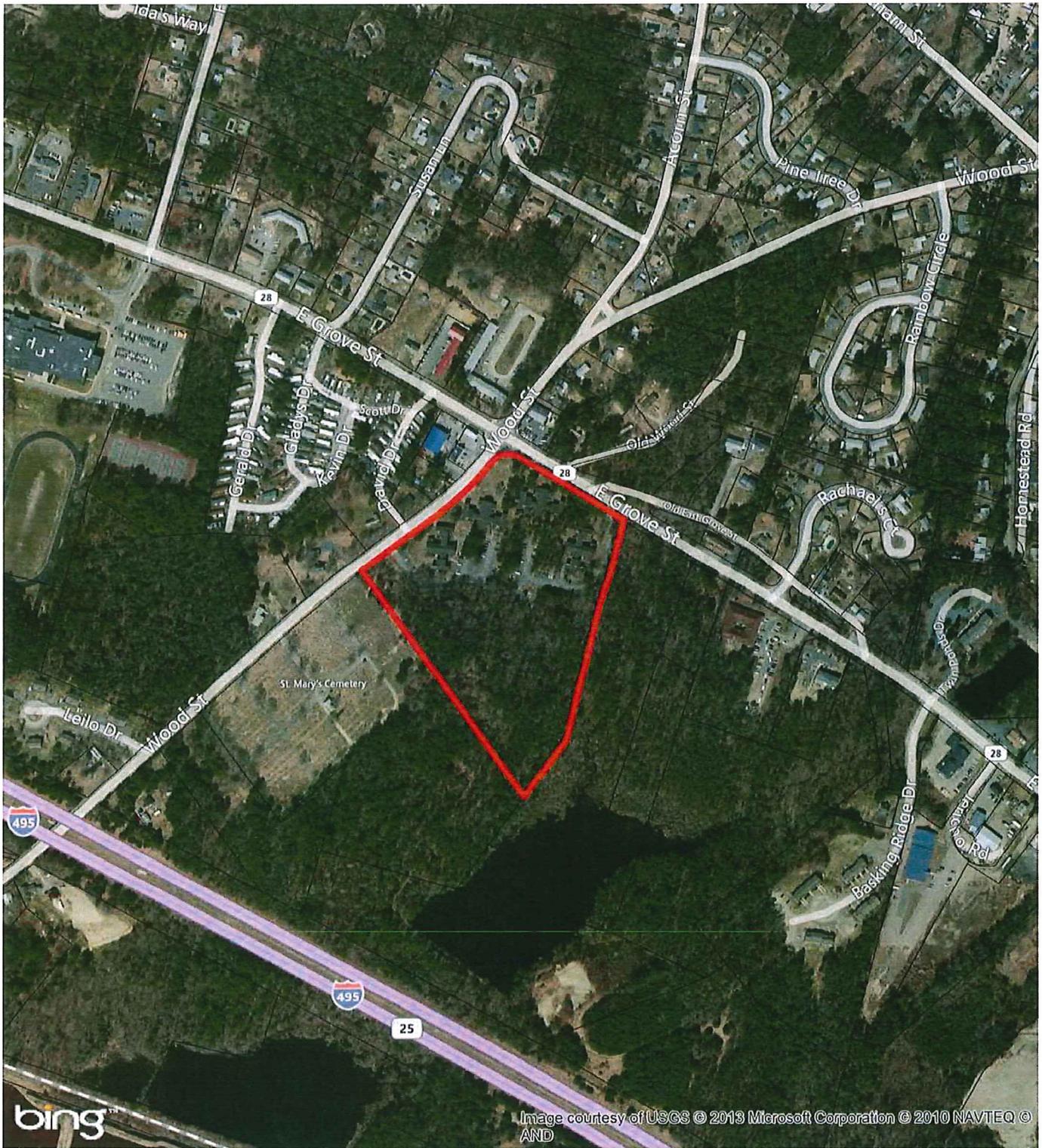


2,000 Feet

USGS Locus
Middlebury Arms
Middleboro, MA

Date: 6/17/2013

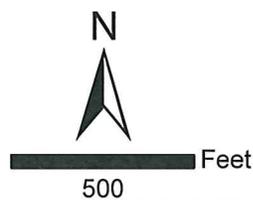
Figure 1



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Legend

-  Site Locus
-  Parcels



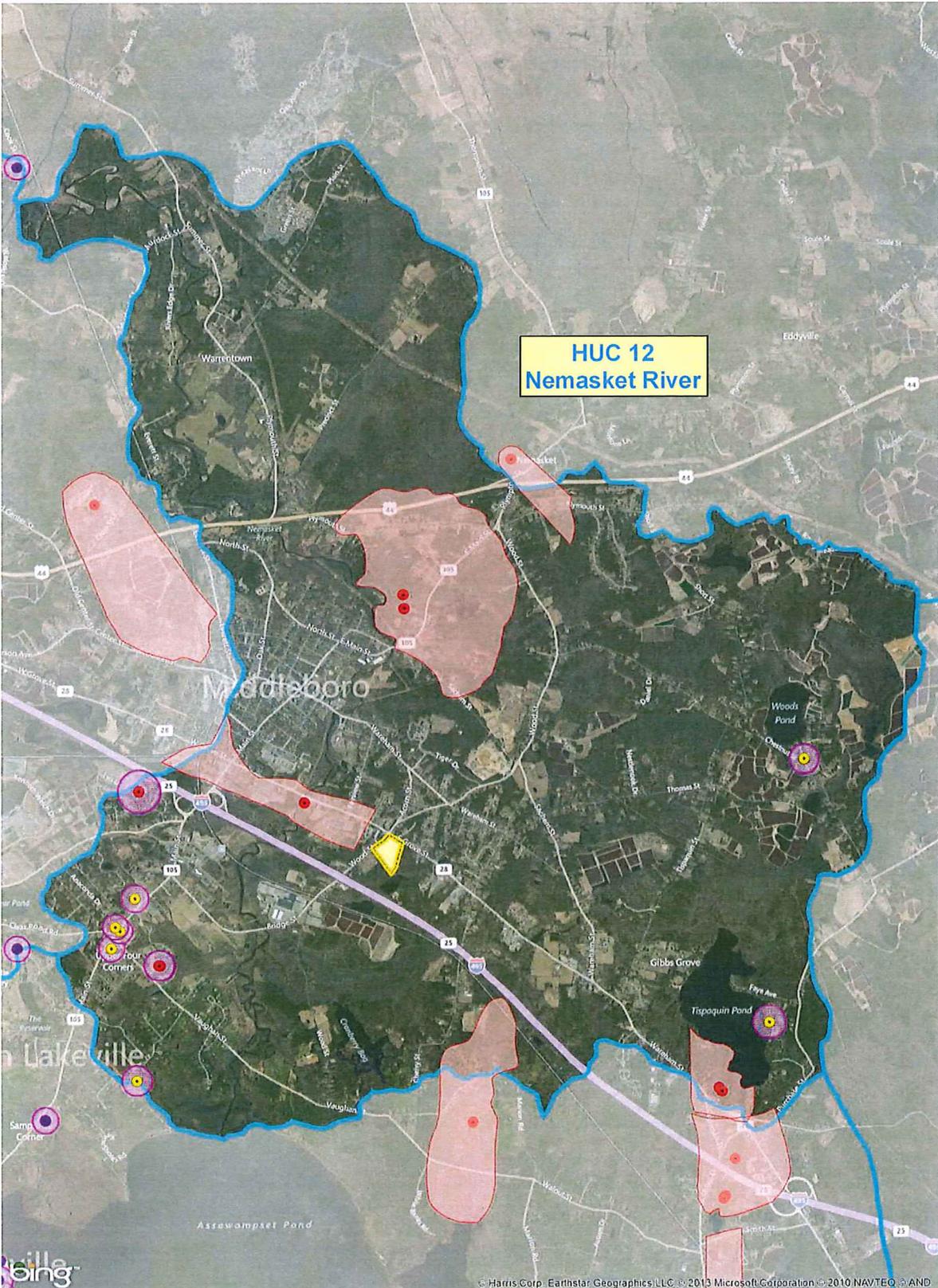
Horsley Witten Group
 Sustainable Environmental Solutions
 80 Route 6A • Sandwich, MA • 01263
 Tel: 508-833-6600 • Fax: 508-833-3150 • www.horsleywitten.com



Aerial Photo
 Middlebury Arms
 Middleboro, MA

Date: 6/17/2013

Figure 2

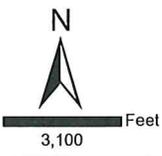


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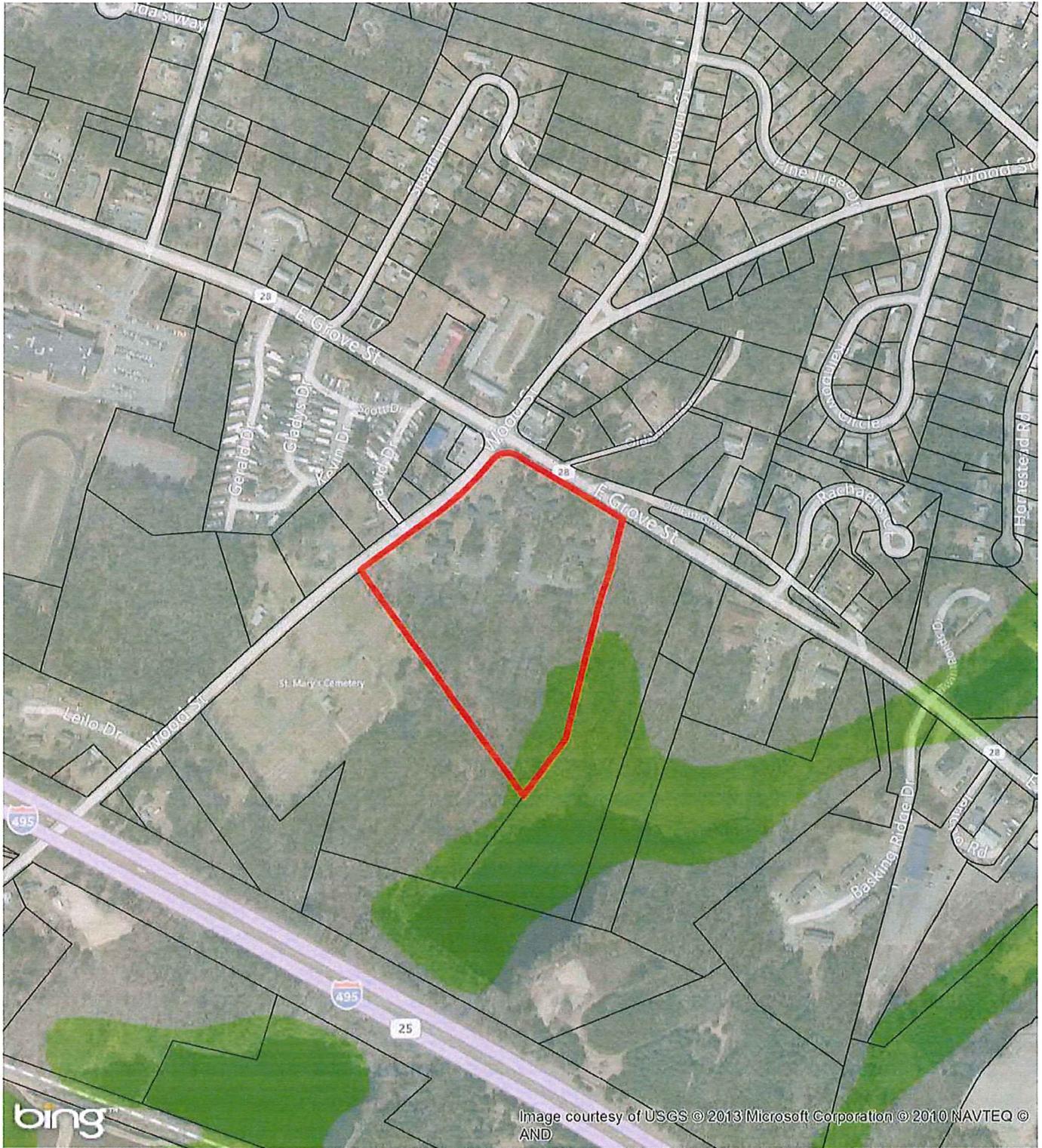
- Site Locus
- Public Water Supplies***
 - Community Groundwater Well
 - Transient Non-Community Well
 - Surface Water Intake
 - Non-Transient Non-community
 - Emergency Surface Water
- Zone I (400ft. radius)
- DEP Approved Zone IIs*
- Interim Wellhead Protection Areas (IWPA)*
- NRCRS HUC Basins*

*GIS Layers: MassGIS 2013



Horsley Witten Group
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**Regulated Water Resource Areas
 Middlebury Arms
 Middleboro, MA**



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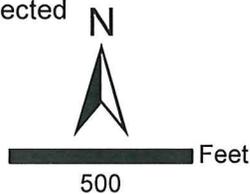
 Site Locus

 Parcels

Flood Zone

X - An area that is determined to be outside the 100- and 500- year floodplains.

 X500 - An area inundated by 500-year flooding; an area inundated by 100- year flooding with average depths of less than 1 foot or with drainage areas less than 1 square mile; or an area protected by levees from 100- year flooding.



Horsley Witten Group
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**FEMA Flood Zones
 Middlebury Arms
 Middleboro, MA**

Date: 8/19/2013

Figure 4

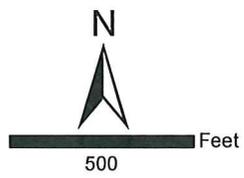


Image courtesy of USGS © 2013 Microsoft Corporation © 2010 NAVTEQ © AND

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Legend

-  Site Locus
 -  Parcels
 -  Streams
 -  Open Water
 -  DEP Wetlands
 -  NHESP Priority Habitats of Rare Species
 -  NHESP Estimated Habitats of Rare Wildlife
 -  DEP Approved Zone IIs
 -  Municipal
- Protected and Recreational OpenSpace**



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**Existing Constraints
 Middlebury Arms
 Middleboro, MA**

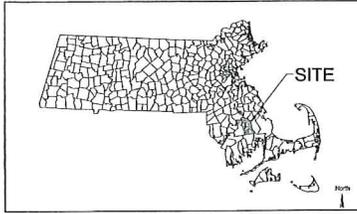
SITE PLANS

MIDDLEBURY ARMS IMPROVEMENTS

89 EAST GROVE STREET

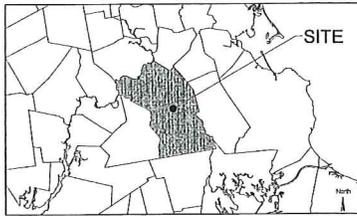
MIDDLEBOROUGH, MASSACHUSETTS

07-29-2013



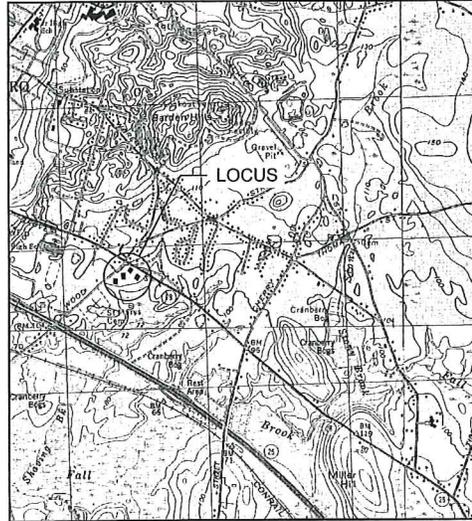
MASSACHUSETTS

Graphic Scale
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Feet



TOWN

Graphic Scale
0 100 200
Feet



VICINITY MAP

Graphic Scale
1-Inch = 1000-Feet

Sheet List Table

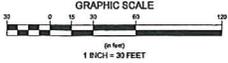
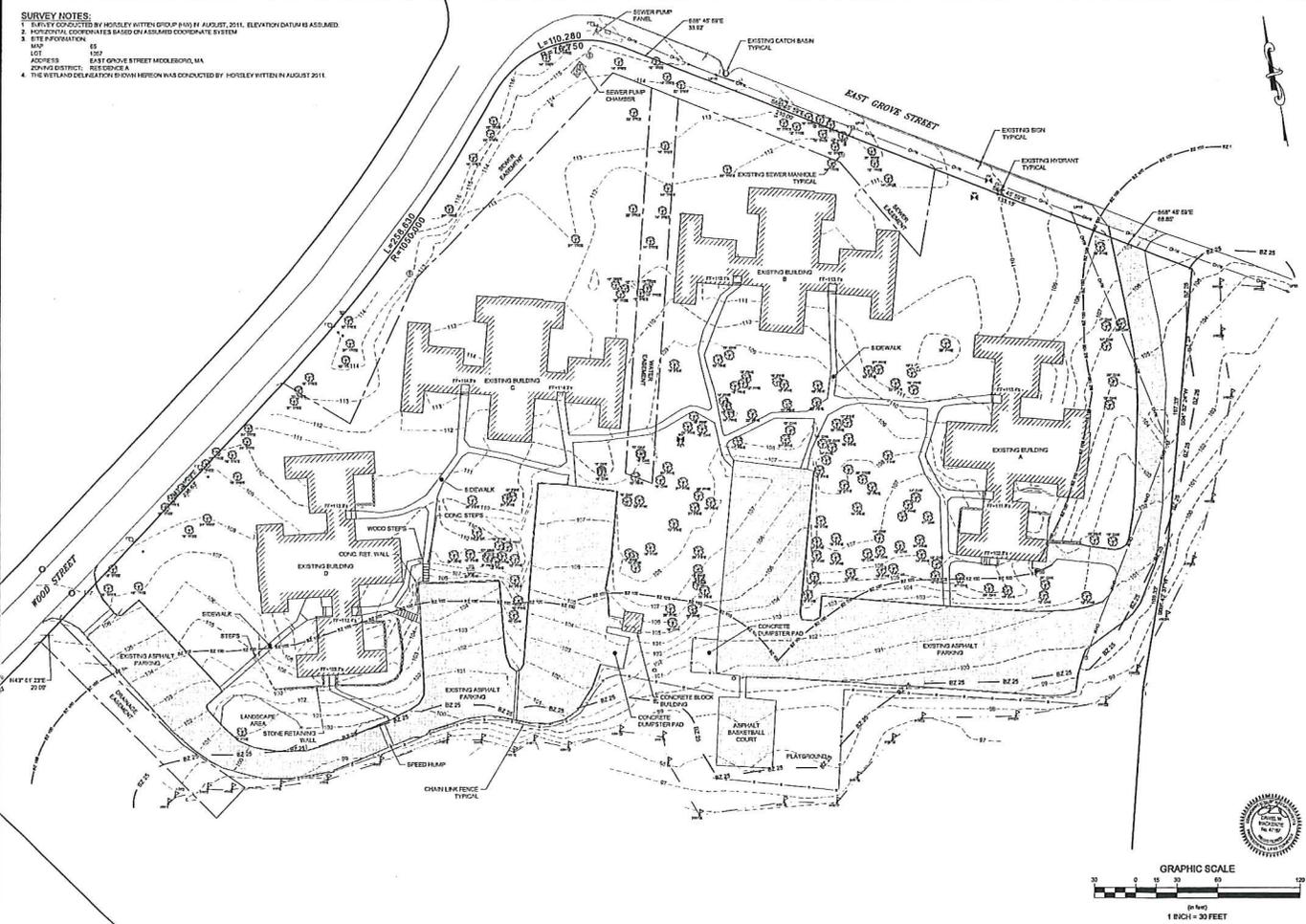
Sheet Number	Sheet Title
1	COVER SHEET
2	CONSTRUCTION NOTES
3	EXISTING CONDITIONS PLAN
4	PROPOSED SITE PLAN
5	GRADING & DRAINAGE PLAN
6	DETAILS 1
7	DETAILS 2
8	DETAILS 3 & PLANTING

<p>Plan Set</p> <p>MIDDLEBURY ARMS IMPROVEMENTS 89 EAST GROVE STREET MIDDLEBOROUGH, MASSACHUSETTS</p>																							
<p>Prepared For:</p> <p>Peabody Properties 536 Granite Street Braintree, MA 02184 781 794-1000</p>																							
<p>Prepared By:</p> <p>Horsley Witten Group, Inc. Sustainable Environmental Solutions www.horsleywitten.com</p>																							
<p>370 Area Street Providence, RI 02908 (401) 272-1717 ext (401) 298-8888 fax</p>	<p>1000 Main Street Salem, MA 01970 (978) 823-6200 ext (978) 823-7100 fax</p>	<p>30 Green Street Haverhill, MA 01830 (978) 866-6881 ext (978) 866-6882 fax</p>	<p>Plan Number</p> <p>11075</p>																				
<p>Date Issued</p> <p>07-29-2013</p>	<p>Engineer</p>	<p>Revisions</p> <table border="1"> <thead> <tr> <th>No.</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td> </td> <td> </td> </tr> </tbody> </table>	No.	Description																			<p>Sheet Number</p> <p>1 of 8</p>
No.	Description																						
<p>Designed By</p> <p>WJGA</p>	<p>Drawn By</p> <p>WJC</p>	<p>Checked By</p> <p>WJC</p>	<p>Drawing Number</p> <p>C-1</p>																				

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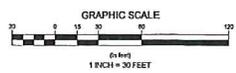
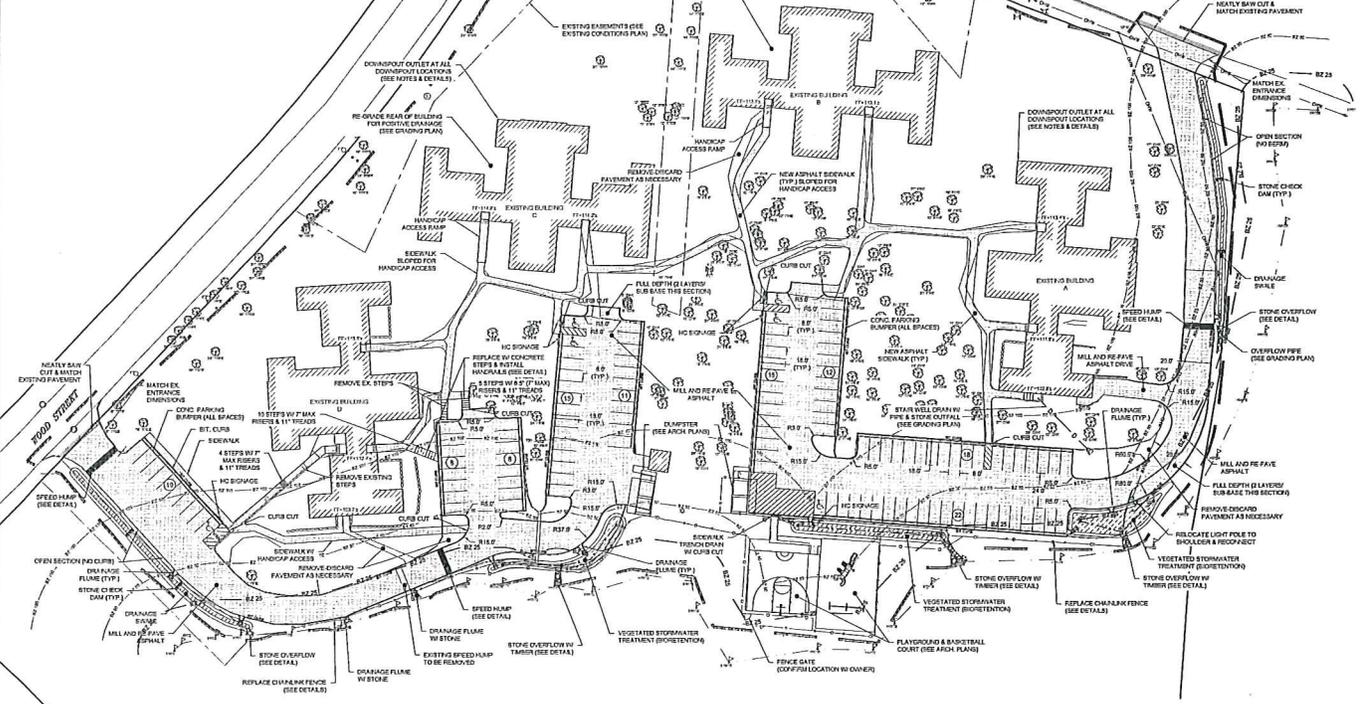
SURVEY NOTES:
 1. SURVEY CONDUCTED BY HORSLEY WITTEN GROUP IN AUGUST, 2011. ELEVATION DATUM IS ASSUMED
 2. HORIZONTAL COORDINATES BASED ON ASSUMED COORDINATE SYSTEM
 3. SITE INFORMATION
 LOT 65
 1057
 ADDRESS EAST GROVE STREET MIDDLEBURY, MA
 ZONING DISTRICT RES-0800-A
 4. THE WETLAND DELINEATION BY KIM HERGEN WAS CONDUCTED BY HORSLEY WITTEN IN AUGUST 2011.

Job: middlebury_082913.dwg Project: 082913 H:\Projects\2011\1073_Middlebury_Arms_Improvements\Drawings - 11073\11073-05.dwg
 Job modified: 05/20/13 by J. H.



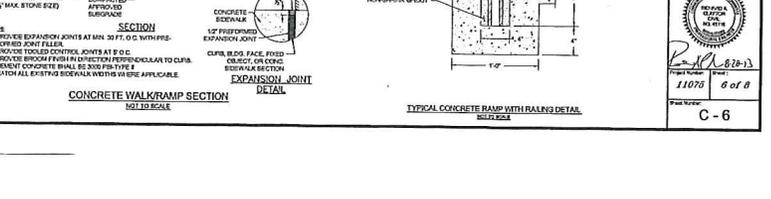
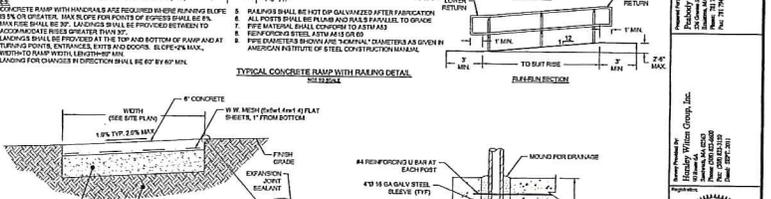
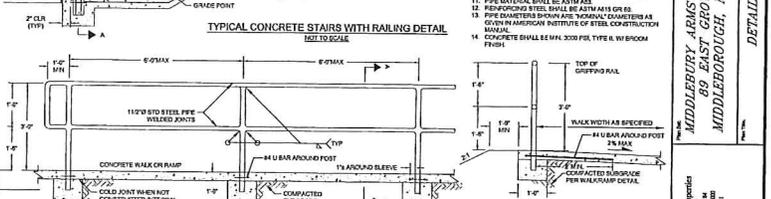
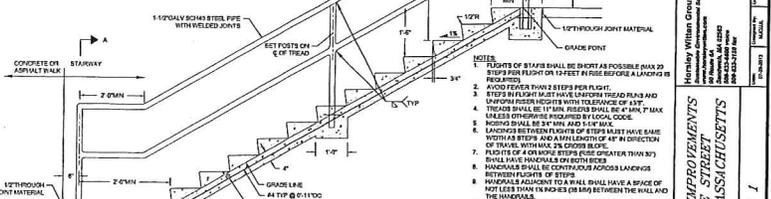
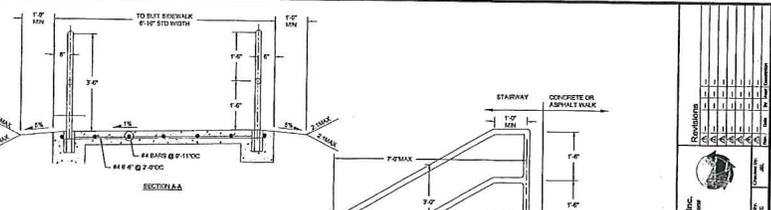
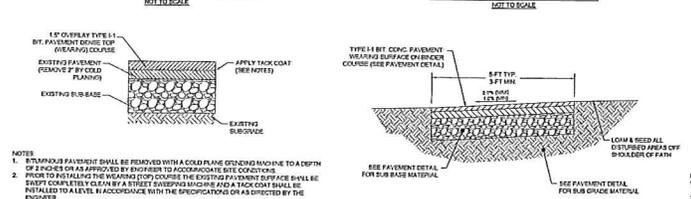
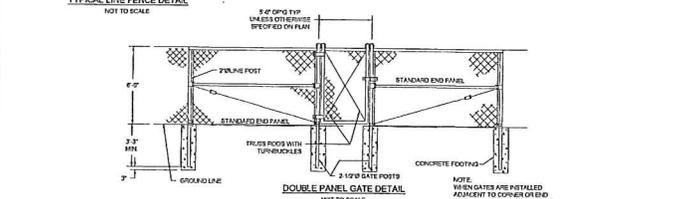
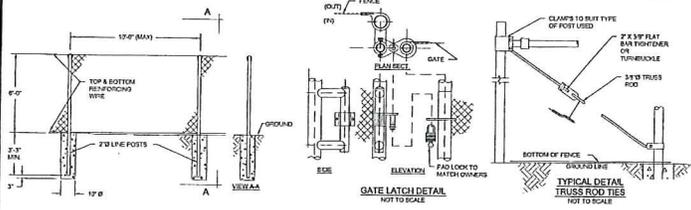
Revisions NO. DATE BY DESCRIPTION 1 11/15/11 JH Initial Survey 2 01/10/12 JH Final Survey 3 05/20/13 JH Final Survey	
Prepared by: Horsley Witten Group, Inc. 100 Park Street Middlebury, Massachusetts 05750 Phone: 802.243.2100 Fax: 802.243.2101 www.horsley-witten.com	
Project Name: MIDDLEBURY ARMS IMPROVEMENTS 89 EAST GROVE STREET MIDDLEBROUGH, MASSACHUSETTS	
Drawing Title: EXISTING CONDITIONS PLAN	
Project No.: 11073	
Drawing No.: 3 of 8	
Date: 05/20/13	
Scale: 1" = 30'	

GENERAL NOTES:
 SEE ARCHITECTURAL PLANS FOR ADDITIONAL NOTES AND SITE REQUIREMENTS INCLUDING BUT NOT LIMITED TO THE FOLLOWING:
 • TREE REMOVAL AND PLANTING
 • ROOF DEMOLITION/CHANGE DRAINAGE
 • LAWN REPAIR
 • SIGNAGE
 • UTILITIES AS SHOWN
 SEAN THREDA, PLS & DATE APPROXIMATE. CONTRACTOR SHALL REVIEW AND LAYOUT IN THE FIELD AND COORDINATE ANY NECESSARY MODIFICATIONS WITH THE DESIGNER.
 DOWNPOUTS: 20 PER BUILDING FOR A TOTAL OF 63. SEE DETAIL FOR FLASH BLOCK & P-FWS.
 CONTRACTOR SHALL PROVIDE TEMPORARY DRAINAGE SYSTEM TO PROTECT WATER TABLE OF THE PROPOSED PLANTING IN THE AREA OF THE COMMUNITY ROOM AND THE FELLER STRUCTURE AS SHOWN IN THE ARCHITECTURAL ESTABLISHMENT IN THE OPINION OF THE ARCHITECT HAS BEEN ACHIEVED. OWNER WILL PROVIDE THE WATER ISSUES AND THE DRAINAGE SYSTEM WILL REMAIN THE PROPERTY OF THE CONTRACTOR FOR ESTABLISHMENT.



PROJECT NO. 11072513 SHEET NO. 4 of 8 DATE 08/29/13	
PROJECT NAME: MIDDLEBURY ARMS IMPROVEMENTS 89 EAST GROVE STREET MIDDLEBROUGH, MASSACHUSETTS	
DESIGNER: HERBERT WILSON GROUP, INC. 200 WASHINGTON STREET MIDDLEBROUGH, MASSACHUSETTS 01752 PHONE: 802-442-1000 FAX: 802-442-1001	
CONTRACTOR: HERBERT WILSON GROUP, INC. 200 WASHINGTON STREET MIDDLEBROUGH, MASSACHUSETTS 01752 PHONE: 802-442-1000 FAX: 802-442-1001	
C-4	

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- NOTES:**
- HEIGHTS OF STAIRS SHALL BE SHORT AS POSSIBLE (MAX 20 STEPS FOR FLIGHT OR 14 STEPS IN THIS REGION A LANDING IS REQUIRED).
 - AND NO MORE THAN 3 STEPS PER FLIGHT.
 - STAIRS IN FLIGHT MUST HAVE UNIFORM TREAD RISES AND UNIFORM RISES HEIGHTS WITH THE EXCEPT OF LAST.
 - TREADS SHALL BE 11" MIN. RISES SHALL BE 4" MAX. 2" MAX. UNLESS OTHERWISE SPECIFIED BY LOCAL CODE.
 - NOING SHALL BE 3" MIN. AND 5 1/2" MAX.
 - LANDINGS BETWEEN HEIGHTS OF STEPS MUST HAVE SAME WIDTH AS STAIRS AND A MINIMUM OF 48" IN DIRECTION OF TRAVEL WITH MAX. 24" OVERHANG.
 - FLIGHTS OF FOUR OR MORE STEPS (OR GREATER THAN 30") BETWEEN HEIGHTS OF STEPS.
 - HANDRAILS SHALL BE CONTINUOUS ACROSS LANDINGS BETWEEN HEIGHTS OF STEPS.
 - HANDRAILS SHALL BE 1 1/2" DIA. AND SHALL HAVE A GRADE OF NOT LESS THAN 1% INCHES PER FOOT BETWEEN THE WALL AND THE HANDRAILS.
 - ALL HANDRAILS SHALL BE GALVANNEZED AFTER FABRICATION.
 - PIPE MATERIAL SHALL BE ASTM A53.
 - REINFORCING STEEL SHALL BE ASTM A618 OR B6.
 - PIPE END FITTINGS SHALL BE NORMAL DIAMETERS AS GIVEN IN AMERICAN INSTITUTE OF STEEL CONSTRUCTION MANUAL.
 - CONCRETE SHALL BE 3000 PSI TYPE I WITH WORK FRESH.

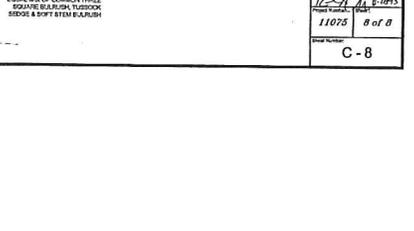
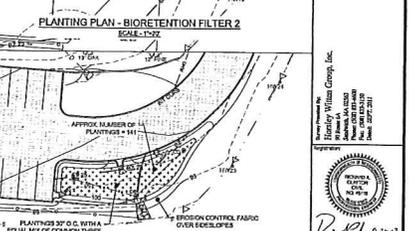
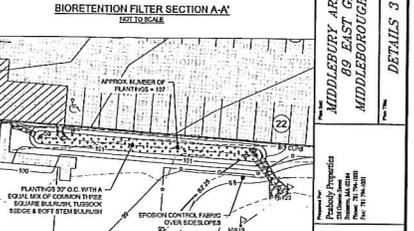
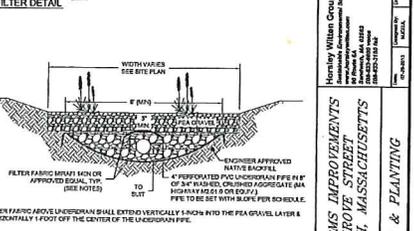
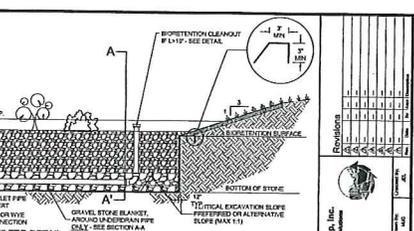
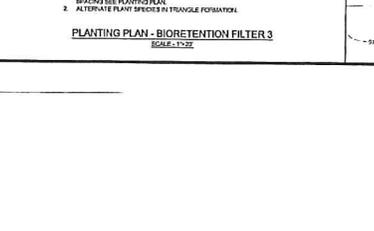
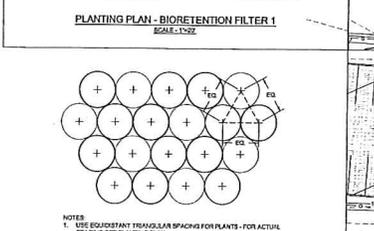
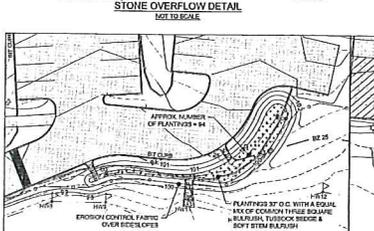
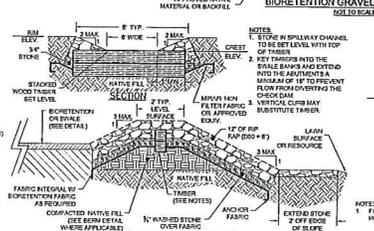
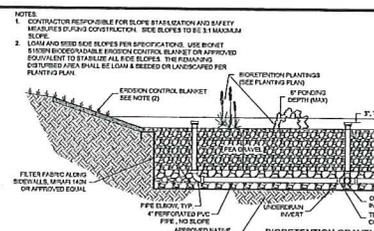
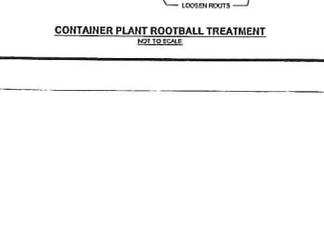
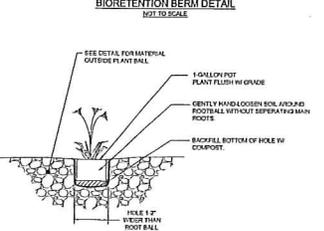
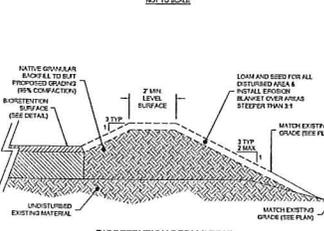
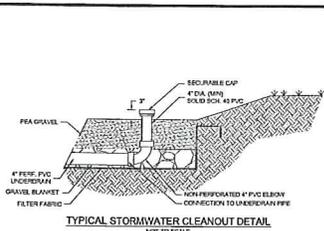
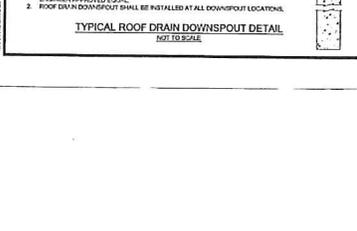
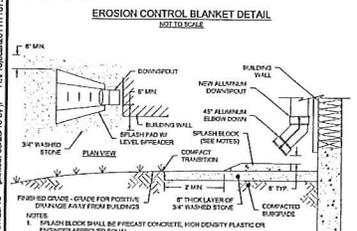
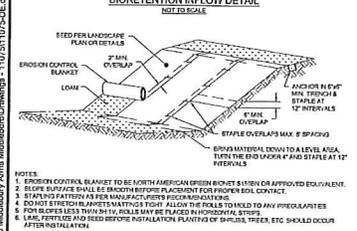
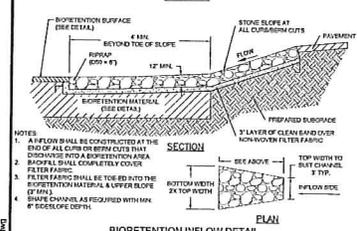
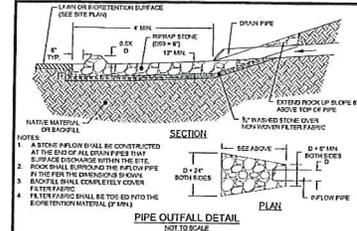
Prepared by: **William W. Group, Inc.**
 25 Commercial Street
 Middleborough, MA 01930
 Phone: 781-748-2000
 Fax: 781-748-2001
 E-mail: info@williamw.com

Project No: **11075-11075-DE-009**
 Date: **08/21/13**

Middlebury Arms Improvements
 89 East Grove Street
 Middleborough, Massachusetts

Scale: **1" = 1'-0"**
 Date: **08/21/13**

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 C-6



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NO.	DESCRIPTION	DATE
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2	ISSUED FOR CONSTRUCTION	11/17/2011
3	ISSUED FOR AS-BUILT	11/17/2011

Middlebury Arms Improvements
 69 EAST GROVE STREET
 MIDDLEBOROUGH, MASSACHUSETTS
 01546

Prepared by: [Signature]
 Checked by: [Signature]
 Date: 11/17/2011

