

**TOWN OF HARVARD
CONSERVATION COMMISSION AGENDA
THURSDAY MARCH 7, 2024 @7:00PM**

Pursuant to Chapter 2 of the Acts of 2023, an Act Making Appropriations for the Fiscal Year 2023 to Provide for Supplementing Certain Existing Appropriations and for Certain Other Activities and Projects, and signed into law on March 29, 2023, this meeting will be conducted via remote participation. Interested individuals can listen in and participate by phone and/or online by following the link and phone number below

UpperTH ProWebinar is inviting you to a scheduled Zoom meeting.

Topic: Conservation Commission

Time: Mar 7, 2024 07:00 PM Eastern Time (US and Canada)

Join Zoom Meeting

<https://us02web.zoom.us/j/88633432623?pwd=WEkySONkZDJYbEM4RGF6TnU1eHU0UT09>

Meeting ID: 886 3343 2623

Passcode: 007170

One tap mobile

+13126266799,,88633432623# US (Chicago)

+16469313860,,88633432623# US

Dial by your location

• +1 646 931 3860 US

• +1 929 436 2866 US (New York)

• +1 301 715 8592 US (Washington DC)

Meeting ID: 886 3343 2623

Find your local number: <https://us02web.zoom.us/j/88633432623?pwd=WEkySONkZDJYbEM4RGF6TnU1eHU0UT09>

Public Hearings:

7:02pm **Continuation of a Notice of Intent Hearing – Shakers’ Quarry Property Owner’s Association, Inc., Stonecutters Path and Quarry Lane, Harvard#0124-01**, for the grinding and removal of existing asphalt, repairs to gravel base, and resurfacing the roadways, and the replacement of an 18” culvert and reforming portions of the existing open channel drainage system within the 100’ wetland buffer zone

7:05pm **Request for Determination of Applicability Hearing – Alice von Loesecke, 84 Warren Ave, Harvard#0124-05**, for emergency electrical and gas line replacement within 200’ of Bare Hill Pond

7:20pm **Notice of Intent Hearing – Paul Cavicchio, 39 Turner Lane, DEP#177-741, Harvard#0124-02**, for the addition of a mudroom, shower, and deck within the 200’ wetland buffer zone of Bare Hill Pond

7:50pm **Notice of Intent Hearing – CSX Transportation, Inc., CSXT Railway Right-of-Way at Route 2, Harvard#0124-03**, for improvements to the existing bridge clearance within the 100’ wetland buffer zone – **Waiver Requested**

8:00pm **Request for Determination of Applicability Hearing – Janet Waldron, 76 Warren Avenue, Harvard#0224-01**, for the removal of ten trees causing a threat to human health and property safety within the 200’ wetland buffer zone to Bare Hill Pond

New Business:

1. Discuss Annual Reappointments to the Conservation Commission
2. Request to Extend an Order of Conditions – Harvard Department of Public Works, DEP#177-662
3. Request for a Certificate of Compliance – 38 Lover’s Lane, DEP#177-727
4. MACC Annual Environmental Conference Round-up
5. Act on Nashua Rivers Wild & Scenic Stewardship Council Community Grant Program 2024 Application - Harvard Invasive Plant Project (HIPPP)

The listing of matters are those reasonably anticipated by the chair which may be discussed at the meeting. Not all items listed may in fact be discussed and other items not listed may also be brought up for discussion to the extent permitted by law.

Old Business:

1. Update on Warrant Article for Wetland Protection Bylaw Fees
2. Update on Action Items from the Strategic Planning Session
3. Update on Enforcement Order – 351 Ayer Road
4. Status Report Pine Hill Village, DEP#177-586
5. Status Report 90 Warren Ave, DEP#177-719, Harvard#1122-02

Standard Business:

1. Updates from Representatives & Liaison
2. Updates from the Conservation Agent
 - Recording Secretary
 - Transfer Station Committee Request for Comments
 - Merrimack Restoration Partnership Meeting
 - MCA Land Protection Workshop
 - Walk-in Office Hours
 - 203 Ayer Road Pre-construction Meeting
3. Approve Minutes
4. Approve Invoices
 - Alpha Graphics - \$875.00 (wetland signs)

NEXT MEETING: MARCH 21, 2024

AS

Re: Extension of Generic Order of Conditions

Tim Kilhart <tkilhart@harvard-ma.gov>

Mon 02/12/24 1:06 PM

To:Liz Allard <lallard@harvard-ma.gov>

Liz,

I am requesting that the Conservation Commission grant a 3 year extension on the DPW Generic NOI which expires on May 7, 2024. I have reviewed the documents and do see any necessary changes. Let me know when this will come up on your agenda.

Thanks,

Timothy B. Kilhart
Harvard DPW Director
47 Depot Rd.
Harvard, MA 01451
978-456-4130 office
978-456-4125 fax
tkilhart@harvard-ma.gov

From: Liz Allard <lallard@harvard-ma.gov>
Sent: Friday, February 9, 2024 8:43 AM
To: Tim Kilhart <tkilhart@harvard-ma.gov>
Subject: Extension of Generic Order of Conditions

Hi Tim,

In responding to Jessie Panek, the ConCom member who brought the erosion happening at the corner of Warren Ave & Pinnacle to my attention, I noted the DPW's generic Order of Conditions is set to expire on May 7, 2024. Attached is more than you may need/want, but includes your previous request to extend the Order. This should be filed with the ConCom no less than 30-days prior to its expiration. I'm sure will get this to me way before that. Have a good weekend!

PLEASE NOTE: The Land Use Office and the Building Department have moved to the Hildreth House located at the end of the access driveway behind Town Hall. In addition, my extension has changed to 421. Our mailing address remains the same, as indicated below. Thank you

Liz Allard
Conservation Agent
Town of Harvard
13 Ayer Road
Harvard, MA 01451
978-456-4100 ext. 421

The Commonwealth of Massachusetts Secretary of State has determined that e-mail is a public record. Privacy should not be expected.

January 10, 2024
#0659

Harvard Conservation Commission
13 Ayer Road
Harvard, MA 01451

RE: Request for Certificate of Compliance (DEP File #177-0727)
38 Lovers Lane
Harvard, MA 01451

Dear Members of the Commission:

On behalf of the Applicant, Dave Caponera & Mamie Wyrwal, Dillis & Roy Civil Design Group respectfully requests that a Certificate of Compliance be issued to close out the above referenced project.

As required by General Condition 12 and Special Condition 8d in the Order of Conditions signed on August 24, 2023, we have prepared the WPA Form 8a and attached the as-built septic plan, which was prepared by this office (dated 12/19/2023). These items are attached as required for the Commission's use.

In addition to the as-built plan, a site walk of the property performed by Dillis & Roy in December 2023 indicated that the area adjacent to and over the as-built septic area has been stabilized. (See pictures attached). As the septic system has been installed, backfilled and all areas sodded and or mulched properly, we are requesting that this Order (referenced above) be closed.

We trust this meets your needs at this time. If you have any questions or require any additional information at this time, please do not hesitate to contact the undersigned.

Regards,

DILLIS & ROY
CIVIL DESIGN GROUP, INC.



Jack Maloney
Sr. Project Manager



Backyard area with septic system in woods, behind shed



Front yard where septic tank & pump chamber are located.

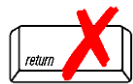


WPA Form 8A – Request for Certificate of Compliance

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

A. Project Information

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



Upon completion of the work authorized in an Order of Conditions, the property owner must request a Certificate of Compliance from the issuing authority stating that the work or portion of the work has been satisfactorily completed.

1. This request is being made by:

DAVID CAPONERA

Name

38 LOVER'S LANE

Mailing Address

HARVARD

City/Town

MA

State

01451

Zip Code

Phone Number

2. This request is in reference to work regulated by a final Order of Conditions issued to:

DAVID CAPONERA & MAMIE WYTRWAL

Applicant

8/24/2023

Dated

177-0727

DEP File Number

3. The project site is located at:

38 LOVERS LANE

Street Address

HARVARD

City/Town

17C

Assessors Map/Plat Number

27

Parcel/Lot Number

4. The final Order of Conditions was recorded at the Registry of Deeds for:

MAMIE WYTRWAL

Property Owner (if different)

WORCESTER

County

69646

Book

97

Page

Certificate (if registered land)

5. This request is for certification that (check one):

the work regulated by the above-referenced Order of Conditions has been satisfactorily completed.

the following portions of the work regulated by the above-referenced Order of Conditions have been satisfactorily completed (use additional paper if necessary).

the above-referenced Order of Conditions has lapsed and is therefore no longer valid, and the work regulated by it was never started.



WPA Form 8A – Request for Certificate of Compliance

Massachusetts Wetlands Protection Act M.G.L. c. 131, §40

A. Project Information (cont.)

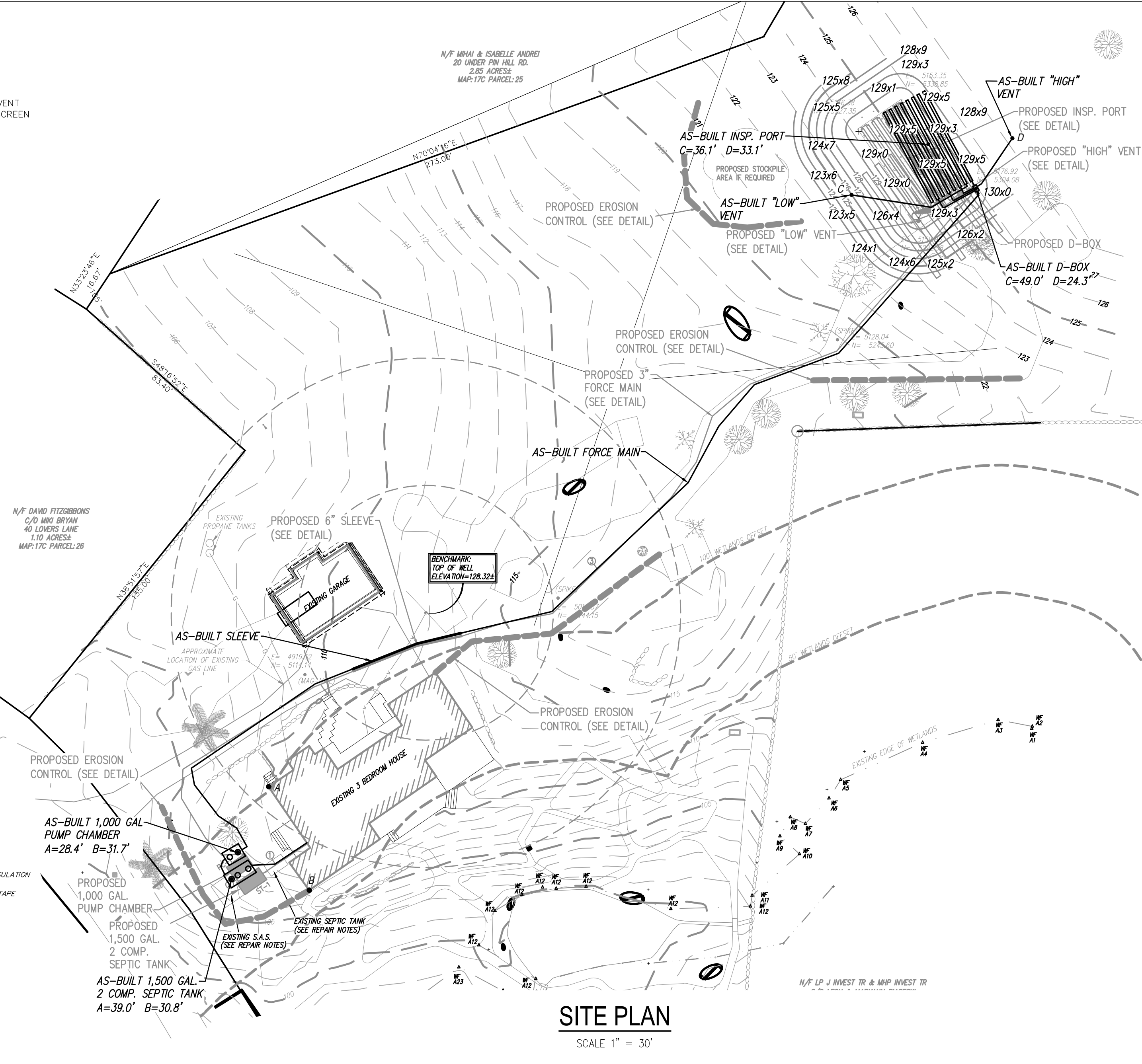
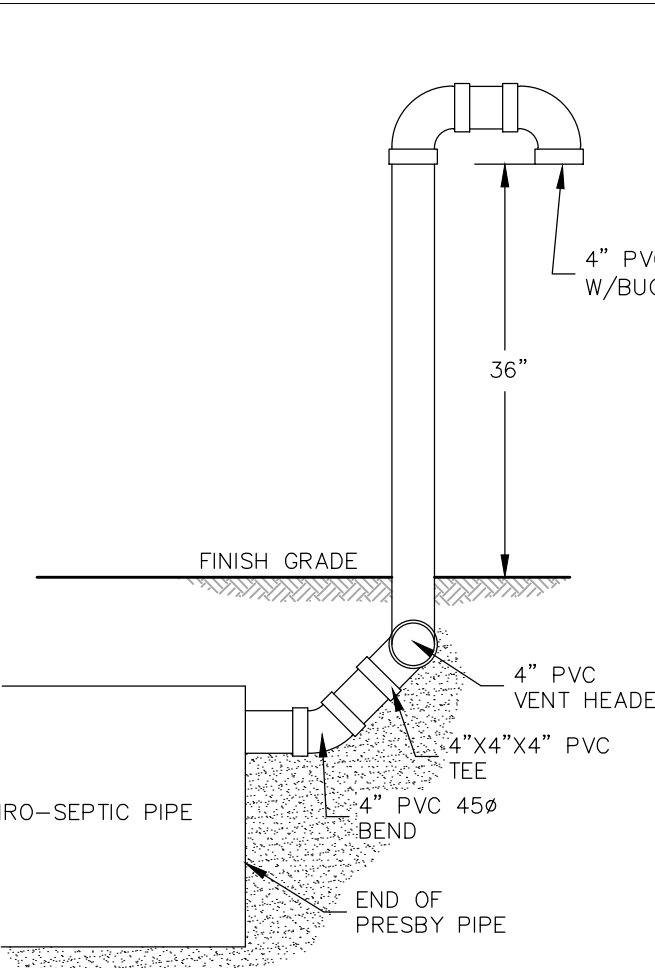
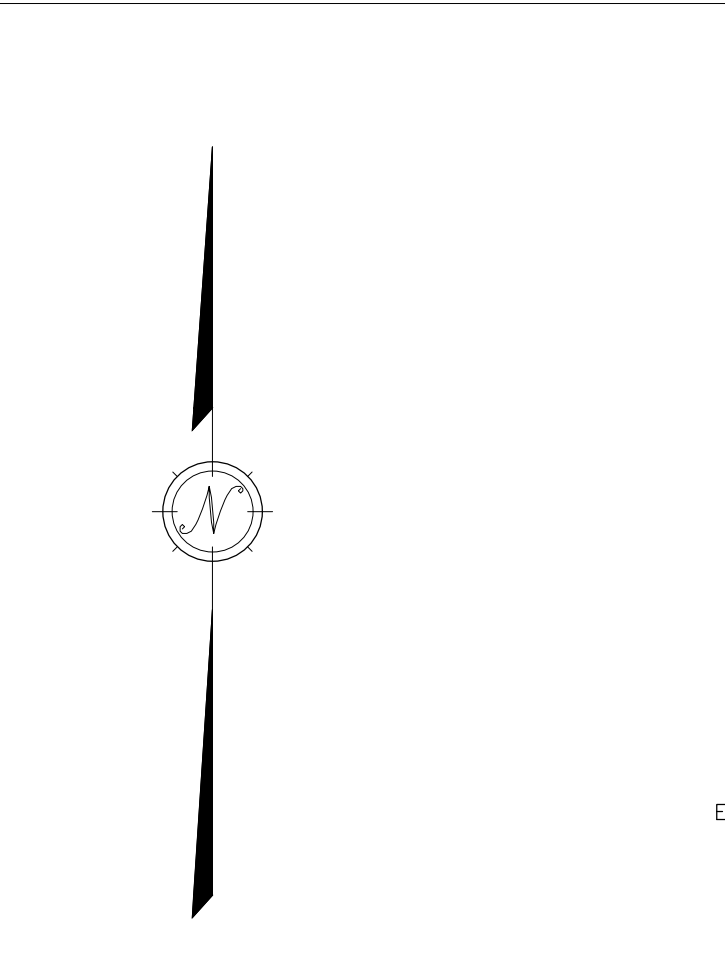
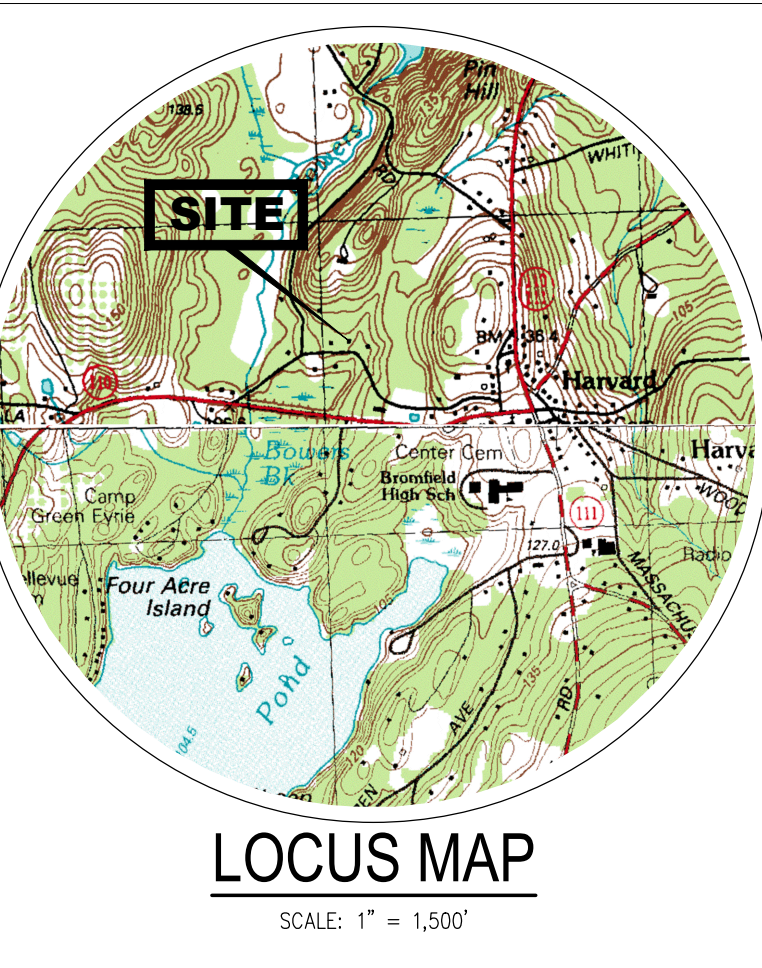
6. Did the Order of Conditions for this project, or the portion of the project subject to this request, contain an approval of any plans stamped by a registered professional engineer, architect, landscape architect, or land surveyor?

Yes If yes, attach a written statement by such a professional certifying substantial compliance with the plans and describing what deviation, if any, exists from the plans approved in the Order.

No

B. Submittal Requirements

Requests for Certificates of Compliance should be directed to the issuing authority that issued the final Order of Conditions (OOC). If the project received an OOC from the Conservation Commission, submit this request to that Commission. If the project was issued a Superseding Order of Conditions or was the subject of an Adjudicatory Hearing Final Decision, submit this request to the appropriate DEP Regional Office (see <http://www.mass.gov/eea/agencies/massdep/about/contacts/find-the-massdep-regional-office-for-your-city-or-town.html>).



- ### GENERAL NOTES:
1. TOPOGRAPHIC INFORMATION IS THE RESULT OF AN ON-THE-GROUND SURVEY PERFORMED BY DILLIS & ROY CIVIL DESIGN GROUP, INC. ELEVATIONS REFER TO AN ASSUMED DATUM (SEE BENCH MARK LOCATED ON PLOT PLAN).
 2. PROPERTY LINE INFORMATION TAKEN FROM RECORDED DEED ON FILE WITH THE WORCESTER REGISTRY OF DEEDS.
 3. DEED BOOK: 18734 PAGE: 256
 4. PROPERTY LINES SHALL BE DETERMINED PRIOR TO CONSTRUCTION OR INSTALLATION OF ANY OF THE PROPOSED IMPROVEMENTS HEREON.
 5. PERCOLATION TESTS PERFORMED IN ACCORDANCE WITH 310 CMR (TITLE 5) REGULATIONS 15.104 AND 15.105.
 6. ANY DEVIATIONS FROM THE DESIGN PLAN MUST BE APPROVED IN WRITING BY DILLIS & ROY CIVIL DESIGN GROUP, INC.
 7. NO PERMANENT STRUCTURES MAY BE CONSTRUCTED OVER THE RESERVE LEACHING AREA.
 8. THE BOARD OF HEALTH REQUIRES INSPECTION OF ALL CONSTRUCTION BY THE DESIGN ENGINEER OR BY AN AGENT OF THE BOARD OF HEALTH, AND THAT SUCH A PERSON CERTIFIES IN WRITING THAT ALL WORK HAS BEEN COMPLETED IN ACCORDANCE WITH THE TERMS OF THE PERMIT AND THE APPROVED PLANS.
 9. FOR PROPER PERFORMANCE, A SEPTIC TANK SHOULD BE INSPECTED AT LEAST ONCE EVERY YEAR AND WHEN THE TOTAL DEPTH OF SCUM AND SOLIDS EXCEEDS ONE THIRD OF LIQUID DEPTH OF THE TANK, THE TANK SHOULD BE PUMPED.
 10. THERE ARE NO POTABLE DRINKING WATER WELLS WITHIN 150 FEET OF THE PROPOSED SEWAGE DISPOSAL SYSTEM UNLESS OTHERWISE NOTED.
 11. THIS DESIGN DOES NOT ACCOMMODATE A CHARGED DISPOSAL.
 12. CONSTRUCTION WITHIN 100 FEET OF A WETLAND RESOURCE AREA AS DEFINED IN THE MASSACHUSETTS WETLAND PROTECTION ACT AND REGULATIONS (310 CMR 10.00) SHALL NOT BE PERFORMED UNTIL AN ORDER OF CONDITIONS OR NEGATIVE DETERMINATION OF APPLICABILITY HAS BEEN OBTAINED FROM THE LOCAL CONSERVATION COMMISSION.
 13. EXISTING UTILITIES SHOWN ON THIS PLAN WERE COMPILED FROM FIELD MEASUREMENT AND RECORD PLANS. THE UTILITIES SHOWN ON THIS PLAN ARE FOR REFERENCE ONLY AND SHOULD NOT BE ASSUMED TO BE CORRECT NOR SHOULD IT BE ASSUMED THAT THE UTILITIES SHOWN ARE THE ONLY UTILITIES LOCATED ON OR NEAR THE SITE. THE CONTRACTOR SHALL CALL DIG SAFE 1-888-816-SAFE PRIOR TO CONSTRUCTION IN ACCORDANCE WITH STATE LAWS.
 14. A NOTICE OF THE EXISTENCE OF THIS ALTERNATIVE SYSTEM SHALL BE RECORDED AT THE REGISTRY OF DEEDS IN THE CHAIN OF TITLE TO THE PROPERTY.
 15. THE OWNER SHALL BE RESPONSIBLE FOR THE APPLICABLE PROVISIONS SET FORTH IN 310 CMR 15.287.
 16. THIS PLAN HAS BEEN PREPARED TO DETAIL THE CONSTRUCTION REQUIREMENTS FOR A SUBSURFACE SEWAGE DISPOSAL SYSTEM ONLY. THIS PLAN SHALL NOT BE UTILIZED FOR ANY OTHER PURPOSE.

- ### CONSTRUCTION NOTES:
1. CONTACT DESIGN ENGINEER PRIOR TO SYSTEM INSTALLATION. DESIGN ENGINEER MUST BE ON SITE ONCE TOPSOIL AND ORGANIC MATERIAL IS REMOVED AND PRIOR TO PLACEMENT OF ANY SAND OR FILL.
 2. SYSTEM TO BE INSTALLED IN ACCORDANCE WITH PRODUCT DESIGN AND INSTALLATION MANUAL, AND STATE AND LOCAL REGULATIONS. FOR PRODUCT INFORMATION OR THE NEAREST DEALER CONTACT PRESBY ENVIRONMENTAL, INC. 143 AIRPORT ROAD, WHITEFIELD, NH 03598 - PHONE 1-800-473-5298 - WWW.PRESBYECO.COM
 3. MINIMUM OF 4" OF MEDIUM TO COARSE SAND MEETING THE REQUIREMENTS OF ASTM C-33, WITH LESS THAN 2% PASSING A # 200 SIEVE REQUIRED AROUND CIRCUMFERENCE OF ENVIRO-SEPTIC PIPES. (SEE DESIGN AND INSTALLATION MANUAL FOR COMPLETE SAND AND FILL SPECIFICATIONS.)
 4. THE SYSTEM INSTALLER SHALL PROVIDE THE SYSTEM OWNER AND LOCAL APPROVING AUTHORITY WITH A BILL OF LADING CERTIFYING THE SYSTEM SAND FILL MEETS ASTM C-33.
 5. SYSTEM SHALL NOT BE INSTALLED ON FROZEN GROUND OR LEFT UNCOVERED FOR EXTENDED PERIODS OF TIME.
 6. FINISH GRADING SHALL BE DONE IN ACCORDANCE WITH THE PLOT PLAN. ALL DISTURBED AREAS SHALL BE COVERED WITH A MINIMUM OF 4" OF LOAM AND SEEDS WITH A NATIVE GRASS MIXTURE.
 7. BACKFILL OVER THE SOIL ABSORPTION SYSTEM, SEPTIC TANK AND DISTRIBUTION BOX SHALL BE A MINIMUM OF 9 INCHES EXCLUDING TOPSOIL. BACKFILL IN LETS AND SUBSTANTIALLY COMPACTED TOP PREVENT DEPRESSIONS DUE TO SETTLING. BACKFILL OVER THE SOIL ABSORPTION SYSTEM SHALL BE FREE OF STONES AND Boulders GREATER THAN 6 INCHES IN SIZE.
 8. THE BUILDING SEWER SHALL BE LAID ON A COMPACTED FIRM BASE.
 9. ALL PIPING SHALL BE MINIMUM OF SCHEDULE 40 UNLESS OTHERWISE NOTED.
 10. ALL PIPE JOINTS AND CONNECTIONS TO SYSTEM COMPONENTS SHALL BE MECHANICALLY SOUND, WATER TIGHT AND PROTECTED AGAINST DAMAGE BY ROOTS.
 11. ALL BUILDING SEWERS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE STATE PLUMBING CODE 248 CMR 2.00.
 12. OUTLET DISTRIBUTION LINE FROM THE D-BOX TO THE FIRST LINE SHALL BE LAID AT A MINIMUM SLOPE OF 2.0%.
 13. FINAL COVER OVER THE SYSTEM SHALL BE GRADED TO REDUCE INFILTRATION OF SURFACE WATER AND MINIMIZE EROSION. FINISH GRADE SHALL HAVE A MINIMUM SLOPE OF 2%.
 14. EFFLUENT DISTRIBUTION LINES SHALL BE LAID LEVEL.
 15. FILL MATERIAL FOR SYSTEMS CONSTRUCTED IN FILL SHALL CONSIST OF SELECT ON-SITE OR IMPORTED SOILS MATERIAL THAT MEET THE MINIMUM REQUIREMENTS STATED IN 310 CMR 15.25(3).
 16. WHERE FILL IS REQUIRED TO REPLACE UNSUITABLE OR IMPERMEABLE SOILS, THE EXCAVATION OF THE UNSUITABLE MATERIAL SHALL EXTEND A MINIMUM OF 5 FEET LATERALLY IN ALL DIRECTIONS BEYOND THE OUTER PERIMETER OF THE SOIL ABSORPTION SYSTEM TO THE DEPTH OF 3 INCHES INTO THE NATURALLY OCCURRING PERVIOUS MATERIAL.
 17. THE BOTTOM SURFACE OF THE EXCAVATION SHALL BE SCARPED AND RELATIVELY DRY. FILL SHALL NOT BE PLACED DURING RAIN OR SNOW STORMS. IF THE WATER TABLE ELEVATION IS ABOVE THE ELEVATION OF THE BOTTOM OF THE EXCAVATION, THE EXCAVATION SHALL BE Dewatered.
 18. SUBSURFACE COMPONENTS OF A SYSTEM SHALL NOT BE BACKFILLED OR OTHERWISE CONCEALED FROM VIEW UNTIL A FINAL INSPECTION HAS BEEN CONDUCTED BY THE APPROVING AUTHORITY AND PERMISSION HAS BEEN GRANTED BY THE APPROVING AUTHORITY TO BACKFILL. THE SYSTEM, THE DESIGNER SHALL INSPECT THE CONSTRUCTION AFTER THE INITIAL EXCAVATION, PRIOR TO BACKFILLING, AND DURING BACKFILLING. IN ADDITION, THE FINAL INSPECTION OF THE SYSTEM SHALL BE CONDUCTED BY THE APPROVING AUTHORITY. THE SYSTEM INSTALLER AND THE DESIGNER PRIOR TO THE ISSUANCE OF A CERTIFICATE OF COMPLIANCE PURSUANT TO 310 CMR 15.02(3). ANY COMPONENT OF THE SYSTEM WHICH HAS BEEN COVERED WITHOUT SUCH PERMISSION SHALL BE UNCOVERED UPON THE REQUEST OF THE APPROVING AUTHORITY OR THE (DEP). ALL SYSTEM COMPONENTS SHALL BE MARKED WITH MAGNETIC MARKING TAPE OR A COMPARABLE MEANS IN ORDER TO LOCATE THEM ONCE BURIED.
 19. ALL SOIL ABSORPTION SYSTEMS SHALL HAVE A MINIMUM OF ONE (1) INSPECTION PORT CONSISTING OF A PERFORATED FOUR (4) INCH PIPE PLACED VERTICALLY TO THE NATURALLY OCCURRING SOIL OR SAND FILL BELOW THE SYSTEM SAND. THE PIPE SHALL BE CAPPED WITH A SCREW TYPE CAP AND ACCESSIBLE TO WITHIN THREE (3) INCHES OF FINISH GRADE. (SEE DETAIL.)

CALCULATIONS:

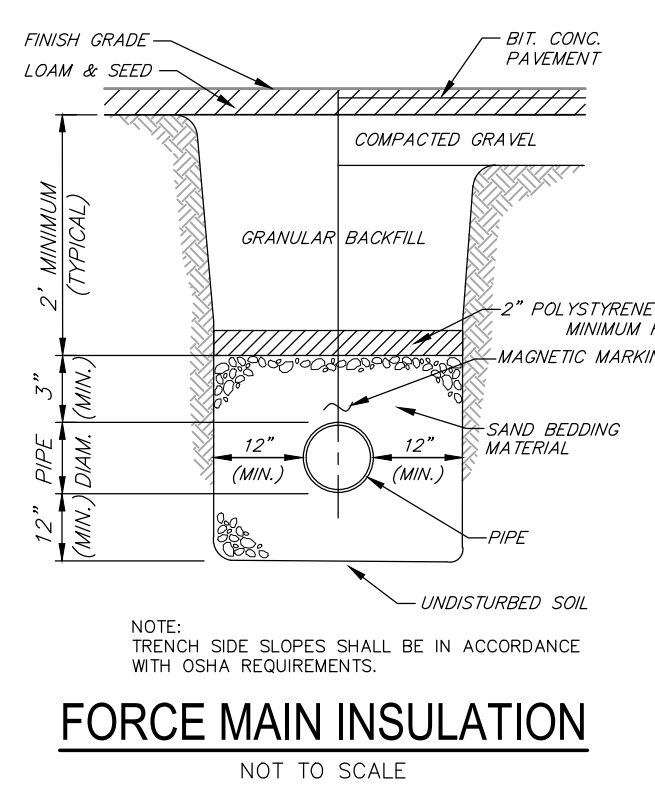
HYDRAULIC LOADING:
THREE (3) BEDROOMS AT 110 GALLONS PER DAY PER BEDROOM = 330 GALLONS PER DAY.

SEPTIC TANK SIZE:
AVERAGE DAILY FLOW = 330 G.P.D.
MINIMUM STORAGE REQUIRED:
COMPARTMENT #1 = 330 G.P.D. X 200% = 660 GALLONS
COMPARTMENT #2 = 330 G.P.D. X 100% = 330 GALLONS
SEPTIC TANK PROVIDED = 1500 GALLON, 2 COMPARTMENT (1,000/500)

PRIMARY LEACHING AREA (PRESBY ENVIRONMENTAL, INC.):
DESIGN PERCOLATION RATE = 40 M/I (SOIL CLASS III)
SLOPE ACROSS SYSTEM = 0%
LINEAL FOOTAGE REQUIRED = 210 L.F. (TABLE A - DESIGN REFERENCE GUIDE-REV. SEPT. 2019)
LINEAL FOOTAGE PROVIDED = 320 L.F. (8 - 40' LINES)
CENTER TO CENTER SPACING REQUIRED = 2.50 FEET
MINIMUM SAND BED REQUIRED = 792 S.F. (TABLE D - DESIGN REFERENCE GUIDE-REV. SEPT 2019)
SAND BED PROVIDED = 792 S.F. (42' x 20.5')

SCHEDULE OF ELEVATIONS:

SYSTEM ELEVATIONS:			AS-BUILT ELEVATIONS:			PIPE DATA:			AS-BUILT DATA:								
TOP EL. OF FOUNDATION WALL = xxx.xx'			105.51			PIPE 1 GRAVITY SEWER 4" PVC (SCH. 40)			L = 24.2'								
INV. EL. AT FOUNDATION WALL = 106.54'						S = 0.02			S = 0.024								
SEPTIC TANK (ST-1) - H=10						PIPE 2 GRAVITY SEWER 4" PVC (SCH. 40)			L = 7.1'								
4" INV. (N) = 106.08			104.93			L = 2'			S = 0.011								
4" INV. (OUT) = 105.83			104.64			S = 0.02			L = 437.6'								
PUMP CHAMBER (PC-1)						PIPE 3 FORCE MAIN 3" PVC (SDR 21)											
4" INV. (N) = 105.79			104.56														
3" INV. (OUT) = 105.54			104.76														
DISTRIBUTION BOX (DB-1)																	
3" INV. (N) = 127.92			127.86														
4" INV. (OUT) = 127.75			127.69														
PRIMARY PRESBY ELEVATIONS:			AS-BUILT PRESBY ELEVATIONS:			LINE NO.			EL. INV. OF 4" PVC:								
LINE NO.			EL. INV. BEG. OF 4" PVC:			EL. INV. OF BOT. OF SAND BED:			LINE NO.			EL. INV. BEG. OF 4" PVC:					
P1-8			127.58			127.00			126.50			P1			127.50		
												P2			127.51		
												P3			127.52		
												P4			127.52		
												P5			127.52		
												P6			127.50		
												P7			127.50		
												P8			127.50		



SOIL TEST DATA

NAME OF APPROVING AUTHORITY: HARVARD BOARD OF HEALTH
NAME OF SOIL EVALUATOR: DUCHARME & DILLIS CIVIL DESIGN GROUP

SOIL CLASSIFICATION:	GEOLOGICAL MATERIAL:	LAND FORM:	SOIL LIMITATIONS:	GENERAL NOTES:	PERCOLATION TEST DATA				
					TEST PIT NO.	DATE	BOTTOM OF TEST HOLE DEPTH FROM SURFACE	RATE: MINUTES PER INCH	
CHATELAIN-HOLDS ROCK OUTCROP	COARSE LOAMY MELT OUT	RIDGES HILLS	NONE	102D	911-4	9/27/11	90"	125.58	40 M/I

DEEP TEST PIT: 911-1	DEPTH	HOR.	TEX.	COLOR	MOTT.	C.W.	OTHER
DATE OF TEST: 9/27/11	0'-4"	A	S.L.	10R/3/2	NONE	NONE	CRUMB, FRABLE
REFUSAL AT:	4'-16"	B	S.L.	10R/5/8	NONE	NONE	S.A.B., FRABLE
OBSERVED:	16'-9"	C	S.L.	10R/4/4	36°	NONE	MASSIVE, FRABLE

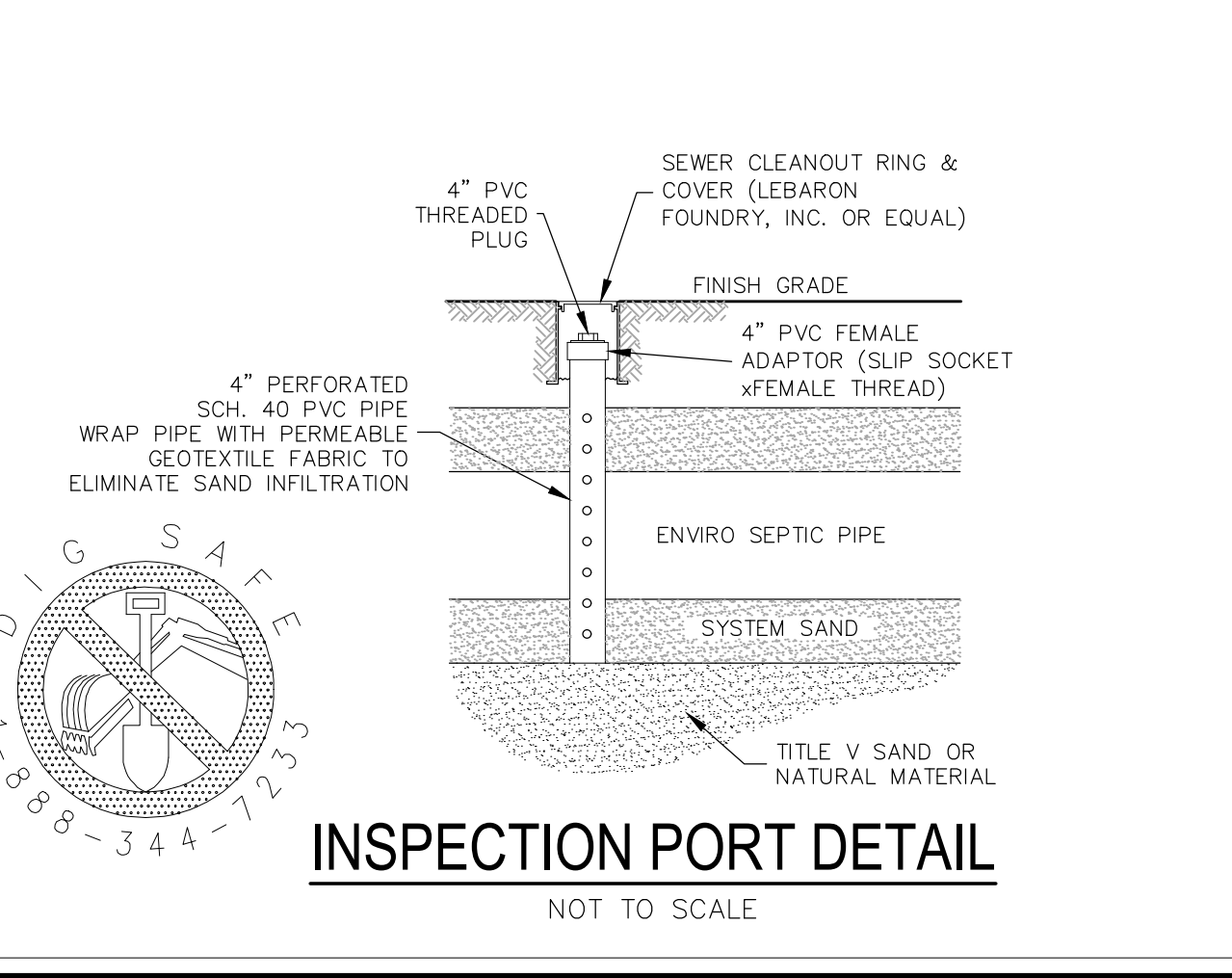
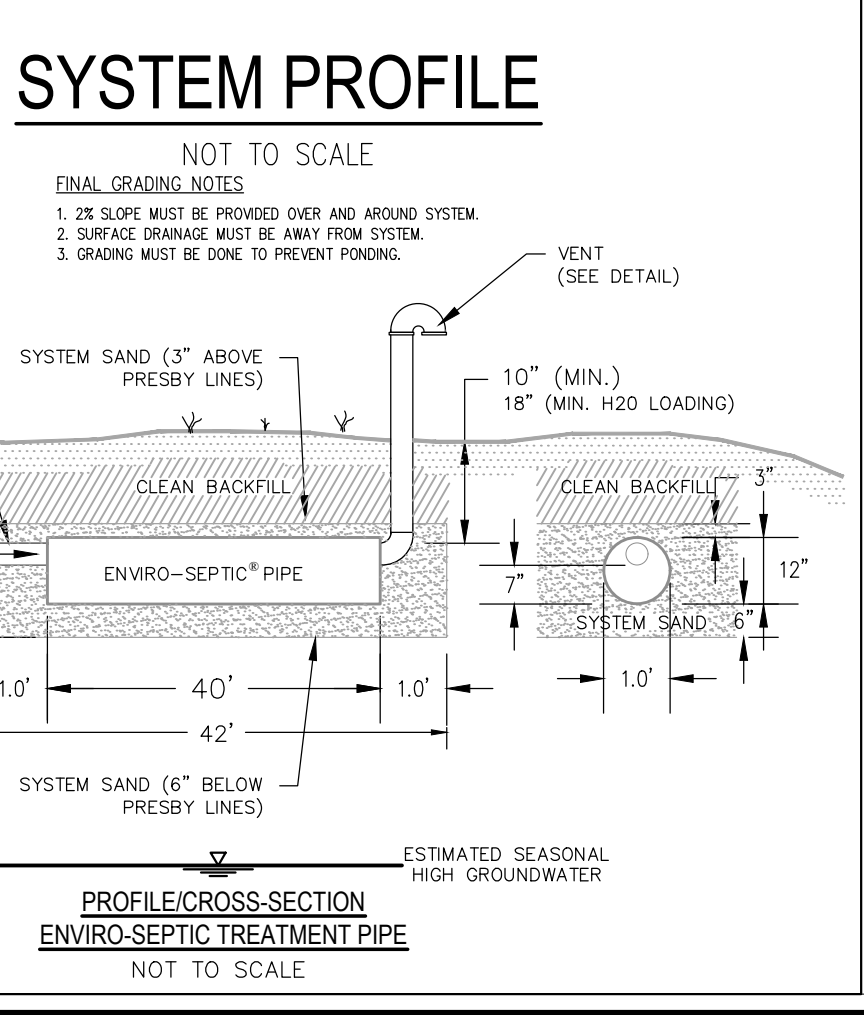
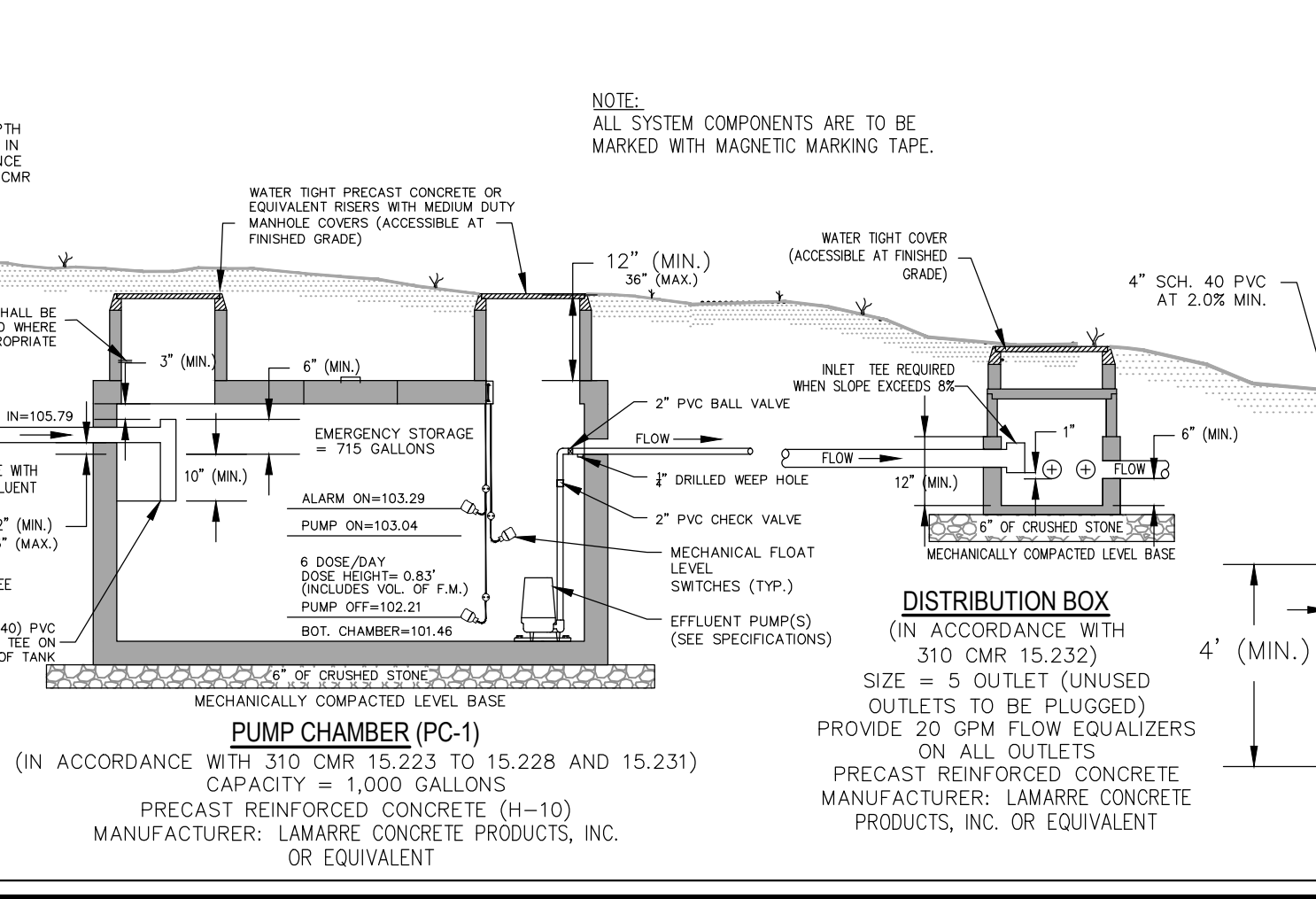
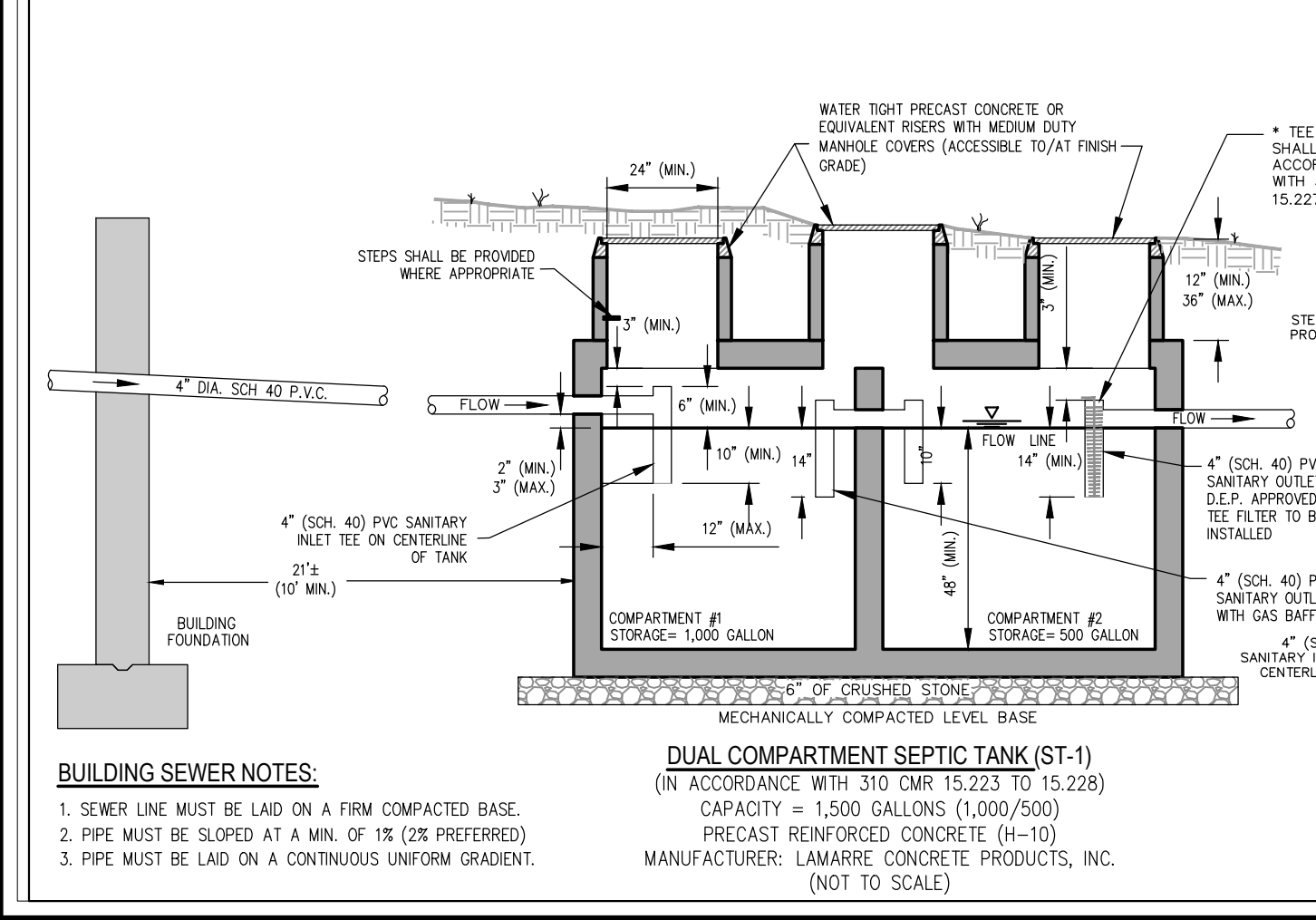
ESTIMATED SEASONAL HIGH GROUND WATER: AT 36" (ELEVATION = 122.54)

DEEP TEST PIT: 911-2	DEPTH	HOR.	TEX.	COLOR	MOTT.	C.W.	OTHER
DATE OF TEST: 9/27/11	0'-5"	A	S.L.	10R/3/3	NONE	NONE	CRUMB, FRABLE
REFUSAL AT:	5'-16"	B	S.L.	10R/5/8	NONE	NONE	S.A.B., FRABLE
OBSERVED:	16'-28"	C1	S.L.	10R/7/2	NONE	NONE	MASSIVE, FRABLE
OBSERVED:	28'-9"	C2	S.L.	10R/4/4	36°	NONE	MASSIVE, FRABLE

ESTIMATED SEASONAL HIGH GROUND WATER: AT 36" (ELEVATION = 121.54)

I CERTIFY THAT I AM CURRENTLY APPROVED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION PURSUANT TO 310 CMR 15.07 TO CONDUCT SOIL EVALUATIONS AND THAT THE ABOVE ANALYSIS HAS BEEN PERFORMED BY ME OR BY AN AGENT OF THE DEPARTMENT OF ENVIRONMENTAL PROTECTION WHO IS LICENSED AND REGISTERED IN THE STATE OF MASSACHUSETTS. I FURTHER CERTIFY THAT THE RESULTS OF MY SOIL EVALUATION AS INDICATED ON THE ATTACHED SOIL EVALUATION FORM, ARE ACCORDANT WITH 310 CMR 15.100 THROUGH 15.107.

Jack Maloney
LICENSED SOIL EVALUATOR: WILLIAM J. "JACK" MALONEY, JR. (S.E.# 13704)



- ### REPAIR NOTES:
1. CONTRACTOR TO VERIFY ELEVATION (*) PRIOR TO THE START OF CONSTRUCTION AND REPORT TO ENGINEER ANY VARIATIONS IN ELEVATIONS TO THOSE SHOWN ON THIS PLAN.
 2. EXISTING BUILDING SEWER TO BE CLEANED AND INSPECTED FOR STRUCTURAL INTEGRITY, WATER TIGHTNESS, SLOPE AND GRADE. IF FOUND TO BE UN-ACCEPTABLE, REPLACE WITH NEW SCHEDULE 40 BUILDING SEWER PIPE IN ACCORDANCE WITH 310 CMR 15.222.
 3. EXISTING SEPTIC TANK TO BE PUMPED, CRUSHED AND BACKFILLED WITH CLEAN GRANULAR MATERIAL, AND/OR REMOVED IN ACCORDANCE WITH THE TOWN OF HARVARD'S BOARD OF HEALTH REGULATIONS AND A NEW 1,500 GALLON SEPTIC SHALL BE INSTALLED.
 4. EXISTING SYSTEM MAY BE ENCOUNTERED DURING THE INSTALLATION OF NEW SOIL ABSORPTION SYSTEM (S.A.S.). REMOVAL, DISPOSAL AND UTILIZATION OF MATERIAL SHALL BE IN ACCORDANCE WITH THE TOWN OF HARVARD'S BOARD OF HEALTH RULES AND REGULATIONS.

LEGEND

DESCRIPTION	DRAWING ENTITY
DENOTES EXISTING CONTOUR (INDEX)	INDEX
DENOTES EXISTING CONTOUR (INTERMEDIATE)	INDEX
DENOTES PROPOSED CONTOUR (INDEX)	INDEX
DENOTES PROPOSED CONTOUR (INTERMEDIATE)	INDEX
DENOTES LIMIT OF EXCAVATION OF UNSUITABLE SOILS	5' EXC.
DENOTES PROPOSED SEWER LINE	S
DENOTES PROPOSED WATER LINE	W
DENOTES PROPOSED UNDERGROUND UTILITIES	U
DENOTES PROPOSED CONCRETE SEPTIC TANK	ST-1
DENOTES PROPOSED CONCRETE PUMP CHAMBER	PC-1
DENOTES PROPOSED CONCRETE DISTRIBUTION BOX	DB-1
DENOTES PROPOSED SEWER CLEANOUT	C.O.

DILLIS & ROY
CIVIL DESIGN GROUP

CIVIL ENGINEERS LAND SURVEYORS WETLAND CONSULTANTS

CORPORATE OFFICE: 1 MAIN STREET, SUITE 1 LUNENBURG, MA 01462

CONCORD OFFICE: 100 MAIN ST., SUITE 310 CONCORD, MA 01742

978-779-6091
www.dillisandroy.com

OWNER:
DAVID CAPONERA & MAMIE WYTRWAL
38 LOVERS LANE
HARVARD MASSACHUSETTS 01451

APPLICANT:
DAVID CAPONERA & MAMIE WYTRWAL
38 LOVERS LANE
HARVARD, MASSACHUSETTS 01451

SCALE:
1 in. = 30 ft.

ENGINEER'S CERTIFICATE

I CERTIFY THAT THE HARVARD BOARD OF HEALTH THAT, TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE INDIVIDUAL SEWAGE DISPOSAL SYSTEM, AT THE ABOVE REFERENCED LOCATION, HAS BEEN INSTALLED WITHIN ACCEPTABLE TOLERANCES TO THE LINES AND GRADES SHOWN ON THE APPROVED PLAN AND THAT ANY CHANGES HAVE BEEN INCORPORATED INTO THE AS-BUILT PLAN SUBMITTED TO THE BOARD OF HEALTH.

THE DISPOSAL SYSTEM AS INSTALLED, COMPLIES WITH THE MASSACHUSETTS ENVIRONMENTAL CODE, TITLE 5, AND EXCEPT WHERE VARIANCES HAVE BEEN GRANTED, WITH THE HARVARD BOARD OF HEALTH REGULATIONS AS TO THE PREPARATION TO HORIZONTAL LOCATION, PIPE SLOPES AND GRADES, AND MATERIALS OF CONSTRUCTION.

THE SEWAGE DISPOSAL SYSTEM SHOWN HEREON HAS BEEN DESIGNED/INSTALLED IN ACCORDANCE WITH 310 CMR 15.00 (TITLE 5), MASSACHUSETTS DEPARTMENT OF ENVIRONMENTAL PROTECTION SYSTEM APPROVALS AND/OR CERTIFICATIONS AND THE MANUFACTURERS SYSTEM DESIGN GUIDANCE.

SSS STAKING: 9/15/2023 AS-BUILT INSPECTION: 10/21/2023 FINAL FILL INSPECTION: 12/14/2023

STAMP DATE: 12/19/2023

DATE: 7/10/2023

DESIGN BY: M/JM

DRAWN BY: M/JM

CHECKED BY: GSR

SEWAGE DISPOSAL SYSTEM AS-BUILT
38 LOVERS LANE (M:17C P:27)
HARVARD, MASSACHUSETTS 01451

NO.	DATE	DESCRIPTION	BY
1.	8/17/2023	ADD EROSION CONTROL BARRIER, DETAIL & NOTES	WJM
2.	8/30/2023	PUMP NOTES, PUMP CURVE, HIGH VENT DETAILS, PUMP ELEVATIONS	WJM
3.	12/19/2023	AS-BUILT INFORMATION ADDED	MJM

JOB NO.: 659

DRAWING NO.: 659-SDS

SHEET NO.: 1

OF 1



*Nashua, Squannacook, and Nissitissit Rivers Wild & Scenic Stewardship Council c/o
Nashua River Watershed Association, 592 Main Street, Groton, MA 01450*

Community Grants Program 2024 Application

Project Name: Harvard Invasive Plant Project (HIPP)

Funding Request (\$): 6,476

Name of Municipality or Organization: Harvard Conservation Commission/Harvard Climate Initiative Committee

Organization Address: 13 Ayer Road, Harvard, MA 01451

Name of Primary Contact: Eve Wittenberg, Chair, Conservation Commission

E-mail: ewittenberg01451@gmail.com

Telephone: 978-456-6939

501(c)(3)? Municipality

Yes No

Project Summary:

The Harvard Conservation Commission and the Harvard Climate Initiative Committee will jointly launch a homeowner-targeted educational campaign to mitigate invasive plants on private property with a special focus on water-adjacent yards. The project will include a speaker event, informational booklets, and a resource library featuring tools, books, native seeds, and digital information. The project will be widely publicized to Harvard and Devens residents through multiple avenues.

Project Location: This is a Town-wide educational campaign.

Project Description:

This project is a joint effort of the Harvard Conservation Commission and the Harvard Climate Initiative Committee (HCIC) to **educate, enable, and motivate** Harvard residents to identify and manage invasive plant species on their property. The project is part of a larger, ongoing effort to manage invasive plants across land and bodies of water regardless of ownership, including the Nashua River, Bare Hill Pond, Bowers Brook and other streams, Conservation and other Town-owned land, and State and Federal lands. Educating homeowners on invasive plant species mitigation is a goal of the Harvard Climate Action Plan, adopted by the Harvard Select Board in 2023. The widespread nature of invasive species requires a large-scale, public-private partnership to control the deleterious effects of these plants on the aquatic and terrestrial ecosystems; the Town at large will benefit from residents' efforts on their land that may be facilitated by this project.

The project has three elements:

1. A **speaker event** will kick-off the project in early summer featuring Sudbury Valley Trustees' Land Steward, Jane Maloney, who will **educate** residents on the identification and management of invasive species commonly found in the Harvard area, with a special focus on species present in properties

abutting bodies of water (including education on proper permitting for such activities). The talk will also address replacement planting to prevent regrowth of invasives, and will be complemented by a resource table showcasing other project elements, described next. The event will be recorded and available on the Harvard Cable channel and Town and website, including the HIPP and the HCIC webpages.

2. **Resources** will be developed and acquired to **enable** and assist residents' efforts to manage invasive species. These will include informational booklets identifying common invasive plants and mitigation methods (5x8" booklets, approximately 10-12 pages, using templates developed by the Town of Groton customized for Harvard), native seed packets for replacement plantings, Guide books on native plantings, and tools useful for plant removal (including hand pruners, "Weed wrenches", and herbicide applicators with sponge tips and dye for marking). Booklets and seeds will be distributed at no cost and books and tools will be available for loan in a Resource Library to be located at the Conservation Commission office. The Resource Library will be advertised on the Town and HCIC websites with links to this (and other) information in digital format, including websites for purchasing tools, seeds, and further guides; it will also be highlighted on outreach materials (below).
3. **Outreach** will be conducted to inform and **motivate** residents to become aware of the plants present on their property and how to manage them. Outreach will include a townwide mailing in May (to Harvard and Devens) announcing the project, including the speaker event, informational booklets, Resource Library, web page, and links for more extensive information on invasive species available digitally from Mass Audubon and other sources. Notices will simultaneously be placed in the Harvard Press, on social media (NextDoor Harvard and Harvard Happenings page on Facebook), and sent via email to the HCIC mailing list and those of our partner organizations (MassDevelopment (Devens), the Harvard Conservation Trust, and the Garden Club of Harvard). Flyers and informational tabling will advertise the project at popular town events such as the Lions Club's Fall Fest and the Harvard Flea Market. A second round of outreach will be conducted in the Fall via electronic mail, the Harvard Press, and social media, coinciding with optimal timing for invasive species mitigation.

The final component of the project is an impact evaluation as measured through the project's reach to residents, described below.

The project complements the HCIC "Know Your Land" initiative which focuses on educating residents on public and private land issues. Previous events included a guided walk on Conservation Land highlighting climate-relevant features (including invasive species) and webinars on land protection strategies. Future events will include "Land Coaches" who will provide one-on-one and small group education on climate-related issues, potentially including invasive plant management and native planting, in collaboration with this project. Our efforts extend the existing collaboration between the Conservation Commission and HCIC in protecting natural resources in Town.

Lastly, the project is envisioned as an initial phase of a longer-term effort to develop invasive species management efforts throughout Town, and we anticipate seeking future funding from the Commonwealth for an expanded initiative, including neighboring communities and more hands-on programming (such as "Land Coaches", winter seed sowing seminars, school-based initiatives, and neighbor-to-neighbor projects across property lines). Lessons learned from this endeavor will inform our future efforts and provide baseline data on knowledge, interest, and enthusiasm among residents for such activities, useful to guide our future planning.

Goals of the Stewardship Plan Addressed:

The project addresses the Stewardship Plan Goal A.7, *Minimize the effect of non-native invasive species*, *Objective: Control or diminish the prevalence of aquatic and terrestrial and/or riparian invasive plants and animals*. Two specific elements of the goal will be addressed, in two areas: *Monitor invasive species, ...Learn*

*about methods for control and eradication. **Communicate with and educate the public for prevention and control**; and **Encourage native plantings**—Encourage native landscaping, at home and at businesses, to support wildlife ecology and to reduce escapes of potential new invasive species into the wild.* These goals will be addressed through public education and through the resources provided in the Resource library, including the informational booklets, lending books and tools, and seed packets.

Project Products or Deliverables:

The project will produce four tangible deliverables:

1. **Speaker event:** held in June, 2024 and recorded for Harvard Cable TV channel and Town website.
2. **Informational booklets:** 5x8" bound booklets (approx. 10-12 pp) identifying commonly seen invasive species in Harvard/Devens area and recommended management.
3. **HIPP web page:** a central digital location for resources on invasive species management, including information on Resource Library, informational booklets, speaker event recording, and links to external resources (e.g., [Mass Audubon](#), [Native Plant Trust](#), [Wild Seed Project](#), [NAISMA](#)); posted on HCIC and Conservation Commission websites.
4. **Resource library:** established in Conservation Commission offices, including informational booklets and seed packets available free to residents, plus books and tools available for loan.

Project Evaluation:

As an educational campaign, success will be measured by the number of residents we reach through our speaker event and resource distribution. Metrics will include the number of attendees at the speaker event, the number of informational booklets and seed packets distributed at that and other events and via the Resource Library, the number of visitors to and borrowers of tools and books from the Resource library, and traffic on the project web page. We will collect Harvard/Devens residence for speaker attendees and Resource library visitors to assess reach to Devens, a target population often overlooked in town-wide programming. These outcomes will be tracked and reported as evidence of project success and will guide our future planning for a longer-term effort to develop invasive species management efforts throughout Town.

Project Partners: *Describe their role, expertise, and in-kind services provided.*

This is a collaboration between the Conservation Commission and the Harvard Climate Initiative Committee. All activities will be coordinated by the Conservation Commission and Climate Committee Chairpersons with their time contributed in-kind. The HCIC has experience conducting outreach and education on climate-related issues in Town; the Conservation Commission has conducted invasive species management on public lands and has permitted similar efforts on private land within its jurisdiction. Sudbury Valley Trustees has provided talks on invasive species management for other municipalities and will tailor their standard presentation for Harvard/Devens, with a special focus on water-adjacent land. The Town of Harvard will contribute space and for operating the Resource Library; Town facilities will be used for the speaker event. The Conservation Agent will assist with all activities, as donated time.

Permits or Permissions Required: None required.

Project Timeline:

The project will begin in April, 2024 and conclude in March 2025. Activities will follow this timeline:

- April, 2024: Design informational mailing and booklet.
- May, 2024: Print mailers and booklets; purchase seed packets, books and tools for Resource library and catalog all; send mailer for project launch (including speaker event), place announcements in print and

social media and notifications via electronic mailing lists.

- June, 2024: Speaker event.
- June-July, 2024: design/launch webpage for resources.
- August-October, 2024: conduct Fall outreach, publicize resources and optimal timing for fall invasive species management (events, Harvard Press, social media, website, email lists).
- November-December, 2024: evaluate project success metrics; plan for subsequent grant applications.
- January-February, 2025: prepare MVP/other grant applications for project expansion, collaboration with neighboring communities, additional resources.
- March, 2025: prepare and submit final report.

Any additional project information (if applicable): See letter of support from Harvard Climate Initiative Committee

Project Budget: Harvard Invasive Plant Project (no funding match)

Category	Project tasks/items	Amount Requested	In-kind match	Match details
Contractual services				
	Graphic design for publicity/outreach (25 hours @ \$35) and web page (20 hours @ \$35)	\$1575	\$ 300	Volunteer labor—content input (10 hours @ \$30/hour)
	Speaker fee (SVT)	\$250		
Supplies and materials				
	Speaker event--refreshments	\$ 250		
	Publicity— (initial postal mailing and printing, 2647 residences in Harvard and Devens; printing for second-round publicity –250 copies, no mailing second round)	\$1822		
	Resource library—tools (2 each: weed wrench @ \$250, buckthorn blaster and dye @ \$47, felco pruners @ \$64; shipping approx. \$100)	\$822		
	Resource library—books (Wild Seed Project Guides for Northeast Landscapes: Native Ground Covers, Native Shrubs, and Native Trees—2 copies of each at \$56 for set of 3 guides = \$132 inc. shipping)	\$132		
	Booklets—printing (250@ \$3 each)	\$750		
	Seed packets (200@ \$4.25 each plus \$25 shipping; from Wild Seed Project)	\$875		
Personnel				
	Organizing speaker event		\$600	Volunteer labor (20 hours @ \$30/hour)
	Ordering and tagging tools, books, and booklets for library		\$752	Conservation Agent labor (15 hours @ \$50/hour)
	Supervising graphic designer		\$300	Volunteer labor (10 hours @ \$30/hour)
	Developing webpage for project (on town website)		\$400	Conservation Agent (5) and volunteer labor (5) hours @ \$50 & \$30/hour
TOTALS		\$6476	\$2352	



Harvard's
Climate
Initiative

COMMIT > ACT > THRIVE

March 1, 2024

Eve Wittenberg
Chair, Harvard Conservation Commission
Harvard, MA

Dear Eve,

We are pleased to jointly submit this application with the Conservation Commission to the Nashua, Squannacook, and Nissitissit Rivers Wild and Scenic Stewardship Council for the Harvard Invasive Plant Project. Controlling invasive species is a goal of the Harvard Climate Action Plan, and this project will contribute to our efforts to educate and assist residents in managing invasive species on private land. The project complements and augments our efforts to educate homeowners about public and private lands in Town through our "Know Your Land" initiative. We look forward to joining resources to work on this important project.

Sincerely,

A handwritten signature in cursive script, reading "Ellen Sachs Leicher".

Ellen Sachs Leicher
Chair, Harvard Climate Initiative Committee

AlphaGraphics Shirley
 2 Shaker Road D103
 Shirley, MA 01464
 Phone: 978.425.3600
 email - us799@alphagraphics.com
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Invoice Number: 9453

Bill To:
 Town of Harvard
 13 Ayer Road
 Harvard MA 01451
 E-Mail: lallard@harvard-ma.gov

Date: 2/15/24
Payment Due: 3/16/24
P.O.:

Taken By: stevenb
 Sales Rep: Jeff Schwarz
 Account Type: Charge Account
 Wanted: 2/15/24
 Ship Via: Deliver

Conservation Circle Signs

Quantity	Description	Price
200	4" ACM Circles with Gloss Laminated Graphics, 2 Holes Each for Mounting (100) 'Protected Wetlands' (100) 'No Dumping'	\$ 875.00
 CUSTOM PRINT AND MARKETING SOLUTIONS		Subtotal 875.00
		Tax 0.00
		Shipping 0.00
		Total 875.00
		Deposit (-) 0.00
		Amount Due \$875.00

PAYMENT TERMS: I understand all charged invoices are payable 30 days after invoice date and that a service fee of 1.5% per month will be added to all past due accounts. In the event payment is not made and account is referred to a collection agency, or if legal action is required I will pay collection and/or attorney's fees resulting from such action.
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Signature _____ Time _____
 Print Name _____ Date _____

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