TOWN OF DIGHTON

PLANNING BOARD
979 SOMERSET AVENUE
DIGHTON, MA 02715
Tel: (508) 669-6431, Ext. 114
Fax: (508) 669-4509

Jeff Carvalho, Chairman
Robert J. Woods, Vice Chairman
Joseph Figueiredo, Clerk
Christopher Cunha, Member
Daniel Higgins, Member

RECEIVED
Town Clerk-Dighton, MA
MAR 10 2025
Time: 3:57 PM
By:

TOWN OF DIGHTON
NOTICE OF PUBLIC HEARING

In accordance with the provisions of MGL Chapter 41, Section 81T, and the Dighton Zoning Bylaws Section 4500 Water Resource Protection Overlay District, the Dighton Planning Board will conduct a Public Hearing on Wednesday, April 2, 2025 at 7:00 PM in the Old Town Hall, 1111 Somerset Avenue, Dighton on the petition of Bell Farm Estates, LLC for the approval of a 26-lot Definitive Subdivision entitled Bell Farm Estates within a Water Resource Protection Overlay District located at 0 Milk Street and 0 Council Oak Way, Dighton shown as Dighton Assessor's Map 17, Lots 109, 135, and 208. The proposed 26-lot subdivision is located in a Residential/Agricultural District and Water Resource Protection Overlay District.

Copies of the application and plan may be requested by email at keasterday@dighton-ma.gov or by visiting the Town of Dighton Planning Board's website. Any person wishing to be heard on the above application should appear at the time and place designated for the public hearing.

DIGHTON PLANNING BOARD
Jeff Carvalho, Chairman

February 28, 2025

Jeff Carvalho
Chairman
Dighton Planning Board
979 Somerset Ave
Dighton, MA 02715

Subject: Special Permit Application – Bell Farm Estates
0 Milk St & 0 Council Oak Way
Dighton, MA 02715
CEC Project Number 315-430

Dear Members of the Board:

On behalf of Bell Farm Estates LLC, Civil & Environmental Consultants, Inc. (CEC) herewith submits a Special Permit application and supporting information for the proposed development project located at 0 Milk Street and 0 Council Oak Way.

Bell Farm Estates LLC is proposing a conventional subdivision with 26 single family homes on Assessors Map 76 Lots 109, 135, and 208. The Subdivision, to be known as Bell Farm Estates, will consist of public roads, drainage facilities, individual septic systems on the house lots, and associated infrastructure to be owned and maintained by the Town of Dighton. The project will result in approximately 3,500 linear feet of roadway and associated infrastructure.

The entirety of the project falls within a Zone II Wellhead Protection area and the project as proposed will render more than 2,500 sq. ft. of impervious area, therefore requiring a Special Permit issued by the Planning Board.

Submission Materials

In support of the aforementioned project, the following materials have been provided for your review:

- Two (2) copies of the Application for Special Permit
- Special Permit Narrative Statement
- Tax Status Application Form
- Form E – Certified List of Abutters
- Receipt for Special Permit Application
- One (1) copy of the Stormwater Report, prepared by CEC, dated February 2025.
- One (1) copy of the Definitive Subdivision Plans dated February 2025, prepared by CEC

The following fees have also been provided:

- **Filing fee**: $1,000
- **Project Review**:
    - More than 25 Lots= $25,000 (Provided with Definitive Subdivision Application)

We appreciate your consideration of the enclosed Definitive Subdivision Application. Please contact the undersigned if you have any questions or comments on the submitted materials.

Sincerely,

CIVIL & ENVIRONMENTAL CONSULTANTS, INC.

Chris Vandenberghe, P.E.
Project Manager

David Kelley. P.E
Principal

Cc: Carl Rebello (Bell Farm Estates LLC)

APPLICATION FOR SPECIAL PERMIT

TOWN OF DIGHTON

PLANNING BOARD
979 SOMERSET AVENUE
DIGHTON, MA 02715

06-25

PETITIONER: Bell Farm Estates LLC
NAME: Carl Rebello
ADDRESS: 843 Main Street Dighton MA 02715

LOCATION (from Assessors' Office) PLAT AND MAP 17 LOT NOS. 109, 135 , and 208	
PRESENT ZONING Residential and Agriculture	First Record Date Planning Board Use Only
DATE OF THIS DOCUMENT 03/3/25	FILE: TITLE:

APPLICATION FOR SPECIAL PERMIT

File two (2) completed copies of this application. One (1) copy with the Planning Board and one (1) copy with the Town Clerk in accordance with the Zoning Bylaws. The filing fee as calculated by Appendix A, made payable to the Town of Dighton.

To the Dighton Planning Board:

PROJECT NAME: Bell Farm Estates
SUBJECT PROPERTY ADDRESS: 0 Milk Street and 0 Council Oak Way
ASSESSOR'S MAP/LOT(s): Map 17 Lots 109, 135, 208
ALL APPLICABLE ZONING DISTRICT: Residential and Agriculture
TITLE OF PLAN: Definitive Subdivision Plan "Bell Farm Estates"
PLAN DATED: February 2025
DESCRIBE WHAT IS PROPOSED FOR THIS PROPERTY:
Applicant is proposing a conventional subdivision with 26 single family homes

STATE THE EXACT NATURE OF ACTION OR RELIEF REQUESTED BY THIS APPLICATION AND CITE THE APPLICABLE BYLAW(s) AND/OR BYLAW SECTION(s):
The entirety of the project is within a Zone II Wellhead Protection and will comply with Section 4500 of the Zoning By-Law. As proposed, the project will render greater than 2,500 sq. ft. of impervious area and therefore will require a special permit per use regulation table in Zoning By-Law Section 4550.3(a)

DESCRIBE HOW THIS APPLICATION MEETS THE CRITERIA FOR A SPECIAL PERMIT AS DESCRIBED IN THE APPLICABLE SECTION(s) OF THE DIGHTON ZONING BYLAWS:
The project as proposed will provide significantly more than the required groundwater recharge via the use of two (2) infiltration basins. Each infiltration basin will be preceded by deep sump catch basins and appropriately sized sediment forebays to facilitate the removal of contaminants

THE UNDERSIGNED HEREBY CERTIFIES THAT THE INFORMATION ON THIS APPLICATION AND PLANS SUBMITTED HEREWITH IS CORRECT, AND THAT THE APPLICATION COMPLIES WITH ALL APPLICABLE PROVISIONS OF STATUTES, REGULATIONS AND BYLAWS TO THE BEST OF HIS/HER KNOWLEDGE.
THE ABOVE IS SUBSCRIBED TO AN EXECUTED BY THE UNDERSIGNED UNDER THE PENALTIES OF PERJURY IN ACCORDANCE WITH M.G.L. Ch. 268, §1-A.

Received by the Planning Board: RECEIVED
Date: _____
Time: MAR - 4 2025
Signature: _____
By: Dighton Planning Board

Applicant's Name Carl Rebello
Applicant's Address 843 main st
Dighton ma 02715
Applicant's Phone # 508 3284723
Signature: Carl Rebello

Owner's name, address and signature for authorization (if other than applicant)
Owner's Name _____
Owner's Address _____
_____
Owner's Phone# _____
Signature: _____

Received by the Town Clerk:
Date: _____
Time: _____
Signature: _____

Checklist of items to be submitted with application.

1. ✓ Application Form (x2)
2. ✓ Application Fee (please refer to Fee Schedule)
3. ✓ Project Review Fee (please refer to Fee Schedule) & Completed W-9
4. ✓ Tax Status Application Form
5. ✓ Plans (See applicable Zoning Bylaws for Specific Requirements)
6. ✓ Certified Abutters List
7. ✓ Completed Receipt for Special Permit Application/Site Plan Review (within 3 working days of the submittal date)

RECEIVED
Town Clerk-Dighton, MA
MAR 0 4 2025
Time: 3:09 PM
By: _____

SPECIAL PERMIT NARRATIVE STATEMENT

February 28, 2025

Special Permit Narrative Statement
"Bell Farm Estates"
Definitive Subdivision
Milk Street Dighton, MA

Introduction

This narrative has been prepared in accordance with the Town of Dighton Zoning By-law Section 4564.b.(1-5). The project, if approved, will create 26 single family house lots, each with a minimum of 35,000 sq. ft of area and 175 ft of street frontage.

The entirety of the project falls within a Zone II Wellhead Protection area and the project as proposed will render more than 2,500 sq. ft. of impervious area, therefore requiring a Special Permit issued by the Planning Board. In accordance with Zoning By-law Section 4564.b, the following statement is provided:

Narrative Statement

4564.b(1) - A complete list of all chemicals, pesticides, fuels, or other potentially hazardous materials, including but not limited to road salt or de-icing chemicals, manure, and fertilizers or soil conditioners, to be used or stored on the premises in quantities greater than associated with normal household use, accompanied by a description of the measures proposed to protect all storage containers from vandalism, corrosion, and leakage, and to provide for control of spills.

Response: It is anticipated that no pesticides, fuels, or other potentially hazardous materials including road salt, de-icing chemicals, manure and fertilizers in quantities greater than associated with normal household use will used at the project site.

4564.b(2) - A description of all potentially hazardous wastes to be generated in quantities greater than associated with normal household use, accompanied by a description of the measures proposed to protect all waste storage containers from vandalism, corrosion, and leakage, and to provide for control of spills.

Response: It is anticipated that the project will not generate potentially hazardous wastes in quantities greater than associated with normal household use.

4564.b(3) - For underground or aboveground storage of hazardous materials, certification by a Registered Professional Engineer that such storage facilities or containers are (i) in compliance with all applicable federal or state regulations, (ii) in compliance with design specifications, as prepared by a Registered Professional Engineer, and (iii) are designed with secondary containment adequate to contain a spill the size of the container's total storage capacity.

Response: It is anticipated that the project will not require the use of underground or aboveground storage of hazardous materials.

4564.b(4) - For any proposed activity on a lot which will render more than fifteen (15%) percent of the total lot area or more than 2,500 sq. ft. impervious, a system for groundwater recharge must be provided that does not degrade groundwater quality, by stormwater infiltration basins or similar system covered with natural vegetation. Dry wells shall be used only where other methods are infeasible. Such basins and wells shall be preceded by oil, grease and sediment traps to facilitate removal of contaminants.

Response: The project will render more than 2,500 sq. ft of impervious area. As such the project is proposing two infiltration basins for groundwater recharge. In accordance with the stormwater standards, 0.60-inches of recharge must be provided for the increase in impervious areas on the Site for HSG's A. A total of 8,286 cubic feet (cf) of groundwater recharge is required based on the increase of impervious areas. Through the introduction of the two infiltration basins, a total of 53,702 cf of recharge is proposed, providing significantly more recharge than the regulatory requirement. Each of these basins are preceded by deep sump catch basin and oversized sediment forebays providing more than 44% of the pretreatment requirement in accordance with Massachusetts stormwater standards.

4564.b(5) - For stockpiling or disposal of snow from outside the district, earth removal, storage of sludge or septage, manure storage, treatment works, and/or discharge or process wastewater, a narrative statement, prepared by a Registered Professional Engineer, assessing the impacts, if any, of the proposed activity on groundwater and surface water quality on the premises, adjacent to the premises, and on any wellfield(s) downgradient from the proposed activity or use, accompanied by a description of the measures proposed to protect such wellfields.

Response: It is anticipated that the project will not require the use of underground or aboveground storage of hazardous materials. Each lot will require an onsite sewage disposal system. Each of the systems will be designed in accordance with the applicable local and state requirements for sites located within a Zone II.

Please contact the undersigned if you have any questions. Thank you.

Sincerely,

CIVIL & ENVIRONMENTAL CONSULTANTS, INC.

Chris Vandenberghe, P.E.
Project Manager

David Kelley. P.E
Principal

Cc: Carl Rebello (Bell Farm Estates LLC)

TAX STATUS APPLICATION FORM

Town of Dighton, Massachusetts

TAX STATUS APPLICATION FORM

In order to process your application request efficiently and promptly we ask that you provide us with the following information. **One form must be filled out completely for each parcel(s) owned by you and any other parties involved.**

Date of request: March 3rd, 2025
Requested by:
Name: Bell Farm Estates LLC
Address: 843 Main Street Dighton MA
Telephone Number: 508-328-4723
Assessed Owner: Bell Farm Estates LLC
Current Owner: Bell Farm Estates LLC
(If different from the Assessed owner)

Scope of Work: Conventional Subdivision

Property Address: 0 Milk Street and 0 Council Oak Way

To Be *Completed* and *Initialed* by the Assessors Office

Assessor's Reference (M&L):___-____-_____

If a developer or contractor is involved in this project then this section must be completed.

Contractor/Business Name _____ Business ID_____
Business Address _____ Phone Number_____
Contact person _____

(SIGNATURE REQUIRED TO COMPLETE TAX STATUS)
I hereby attest that all the information provided herein is true and complete to the best of my knowledge.

_____ Petitioner

RECEIVED
MAR 04 2025
By

For Office use only:
Tax Office Initials ASD

*Real Estate	Amt. Due 0
*Personal Property	Amt. Due 0
*Motor Vehicle	Amt. Due 0
*Tax Title	Amt. Due 0

***As part of Article XXVII of Dighton's bylaws, we have adopted MGL Chapter40 Section 57 titled "Licenses & Permits of Delinquent Taxpayers".**

Please Note: You must contact the office that is requesting the Tax Status Report for any questions or information relating to this form.

FORM E – CERTIFIED ABUTTERS LIST

300 feet Abutters List Report

Dighton, MA
January 21, 2025

Subject Properties:

Parcel Number:	017.0-0109-0000.0	Mailing Address:	BELL FARM ESTATE, LLC
CAMA Number:	017.0-0109-0000.0		843 MAIN ST
Property Address:	0 MILK ST		DIGHTON, MA 02715-
Parcel Number:	017.0-0135-0000.0	Mailing Address:	BELL FARMS ESTATE LLC
CAMA Number:	017.0-0135-0000.0		843 MAIN ST
Property Address:	0 COUNCIL OAK WAY		DIGHTON, MA 02715-
Parcel Number:	017.0-0208-0000.0	Mailing Address:	BELL FARM ESTATES LLC
CAMA Number:	017.0-0208-0000.0		843 MAIN ST
Property Address:	0 MILK ST		DIGHTON, MA 02715-

Abutters:

Parcel Number:	016.0-0063-0000.0	Mailing Address:	KENNETH J PACHECO AND CHRISTINE M PACHECO IRRE
CAMA Number:	016.0-0063-0000.0		1860 MILK ST
Property Address:	1860 MILK ST		DIGHTON, MA 02715-
Parcel Number:	016.0-0069-0000.0	Mailing Address:	HEBERT THOMAS G & TRACEY A
CAMA Number:	016.0-0069-0000.0		1935 BUCK PLAIN RD
Property Address:	1935 BUCK PLAIN RD		DIGHTON, MA 02715-
Parcel Number:	016.0-0070-0000.0	Mailing Address:	HAYDEN, KEITH R & DEBORAH A
CAMA Number:	016.0-0070-0000.0		1925 BUCK PLAIN RD
Property Address:	1925 BUCK PLAIN RD		DIGHTON, MA 02715-
Parcel Number:	016.0-0071-0000.0	Mailing Address:	CAREPA, JOSEPH M & MARIA G
CAMA Number:	016.0-0071-0000.0		835 WHITMARSH LN
Property Address:	835 WHITMARSH LN		DIGHTON, MA 02715-
Parcel Number:	016.0-0117-0000.0	Mailing Address:	MORIERA, JAMES P & ELIZABETH M
CAMA Number:	016.0-0117-0000.0		1800 MILK ST
Property Address:	1800 MILK ST		DIGHTON, MA 02715-
Parcel Number:	016.0-0118-0000.0	Mailing Address:	CLOONAN, JEFFREY S & ELIZABETH A
CAMA Number:	016.0-0118-0000.0		1780 MILK ST
Property Address:	1780 MILK ST		DIGHTON, MA 02715-
Parcel Number:	016.0-0119-0000.0	Mailing Address:	ALLEN, RUSSELL R & MARIA
CAMA Number:	016.0-0119-0000.0		811 BROOK ST
Property Address:	811 BROOK ST		DIGHTON, MA 02715-

300 feet Abutters List Report

Dighton, MA
January 21, 2025

Parcel Number:	016.0-0119-0001.0	Mailing Address:	DANIEL, MILLAN & SILVA, MIKAYLA ELIZABETH 1724 MILK ST UNIT A DIGHTON, MA 02715-
CAMA Number:	016.0-0119-0001.0		
Property Address:	1724 MILK ST		
Parcel Number:	016.0-0120-0000.0	Mailing Address:	BEAUSOLEIL, SHEILA A 1820 MILK ST DIGHTON, MA 02715-
CAMA Number:	016.0-0120-0000.0		
Property Address:	1820 MILK ST		
Parcel Number:	016.0-0124-0000.0	Mailing Address:	LOUBEAU, KERLY & PIERRE 1840 MILK ST DIGHTON, MA 02715-
CAMA Number:	016.0-0124-0000.0		
Property Address:	1840 MILK ST		
Parcel Number:	016.0-0125-0000.0	Mailing Address:	SOARES, RODNEY A & WENDY A 1960 MILK ST DIGHTON, MA 02715-
CAMA Number:	016.0-0125-0000.0		
Property Address:	1960 MILK ST		
Parcel Number:	016.0-0126-0000.0	Mailing Address:	HATTON, ROBERT B JR & CHRISTINE M, LE 1940 MILK ST DIGHTON, MA 02715-
CAMA Number:	016.0-0126-0000.0		
Property Address:	1940 MILK ST		
Parcel Number:	016.0-0127-0000.0	Mailing Address:	TAVARES, MARC J & JESSICA P 1920 MILK ST DIGHTON, MA 02715-
CAMA Number:	016.0-0127-0000.0		
Property Address:	1920 MILK ST		
Parcel Number:	016.0-0128-0000.0	Mailing Address:	GAILES FAMILY REVOCABLE TRUST GAILES JOSEPH R & PATRICIA M TRUSTEES 825 WHITMARSH LN DIGHTON, MA 02715-
CAMA Number:	016.0-0128-0000.0		
Property Address:	825 WHITMARSH LN		
Parcel Number:	016.0-0129-0000.0	Mailing Address:	CABRAL, PEDRO JR & SANDRA M TRUSTEES OF THE CABRAL LIVING TRUST 820 WHITMARSH LN DIGHTON, MA 02715-
CAMA Number:	016.0-0129-0000.0		
Property Address:	820 WHITMARSH LN		
Parcel Number:	016.0-0131-0000.0	Mailing Address:	MELLO, TAMMY A 841 BROOK ST DIGHTON, MA 02715-
CAMA Number:	016.0-0131-0000.0		
Property Address:	841 BROOK ST		
Parcel Number:	016.0-0133-0001.0	Mailing Address:	SIMOES JEFFREY & ARRUDA DESARE JOSELYN 1740 MILK ST DIGHTON, MA 02715-
CAMA Number:	016.0-0133-0001.0		
Property Address:	1740 MILK ST		
Parcel Number:	016.0-0133-0002.0	Mailing Address:	COWELL, WILLIAM III & MARCY P 1760 MILK ST DIGHTON, MA 02715-
CAMA Number:	016.0-0133-0002.0		
Property Address:	1760 MILK ST		
Parcel Number:	017.0-0109-0000.A	Mailing Address:	DIGHTON, TOWN OF 979 SOMERSET AVE DIGHTON, MA 02715-
CAMA Number:	017.0-0109-0000.A		
Property Address:	0 ELM ST		

300 feet Abutters List Report

Dighton, MA
January 21, 2025

Parcel Number:	017.0-0130-0000.0	Mailing Address:	K J ARAUJO, LTD PO BOX 643 DIGHTON, MA 02715-
CAMA Number:	017.0-0130-0000.0		
Property Address:	0 MAIN ST		
Parcel Number:	017.0-0136-0000.0	Mailing Address:	DIGHTON, TOWN OF CONSERVATION COMMISSION 979 SOMERSET AVE DIGHTON, MA 02715-
CAMA Number:	017.0-0136-0000.0		
Property Address:	0 COUNCIL OAK WAY		
Parcel Number:	017.0-0137-0000.A	Mailing Address:	DIGHTON, TOWN OF 979 SOMERSET AVE DIGHTON, MA 02715-
CAMA Number:	017.0-0137-0000.A		
Property Address:	0 MAIN ST		
Parcel Number:	017.0-0138-0000.0	Mailing Address:	SOMERSET, TOWN OF 140 WOOD ST SOMERSET, MA 02726-
CAMA Number:	017.0-0138-0000.0		
Property Address:	0 BROOK ST		
Parcel Number:	017.0-0141-0000.0	Mailing Address:	SOMERSET, TOWN OF 140 WOOD ST SOMERSET, MA 02726-
CAMA Number:	017.0-0141-0000.0		
Property Address:	581 BROOK ST		
Parcel Number:	017.0-0164-0000.0	Mailing Address:	ZENECA INC ATTN: L. ALTOMONTE P.O. BOX 15437 WILMINGTON, DE 19850-5437
CAMA Number:	017.0-0164-0000.0		
Property Address:	0 MAIN ST		
Parcel Number:	017.0-0203-0000.0	Mailing Address:	GARCIA, JAMES 1735 MILK ST DIGHTON, MA 02715-
CAMA Number:	017.0-0203-0000.0		
Property Address:	1735 MILK ST		
Parcel Number:	017.0-0205-0000.0	Mailing Address:	MENDOZA, WILLIAM JOHN & DONNA M 1721 MILK ST DIGHTON, MA 02715-
CAMA Number:	017.0-0205-0000.0		
Property Address:	1721 MILK ST		
Parcel Number:	017.0-0206-0000.0	Mailing Address:	JOLY, PAUL R & JUDITH A 707 BROOK ST DIGHTON, MA 02715-
CAMA Number:	017.0-0206-0000.0		
Property Address:	707 BROOK ST		
Parcel Number:	017.0-0207-0000.0	Mailing Address:	JOLY, PAUL R & JUDITH A 707 BROOK ST DIGHTON, MA 02715-
CAMA Number:	017.0-0207-0000.0		
Property Address:	0 BROOK ST		
Parcel Number:	017.0-0209-0001.0	Mailing Address:	KIMBALL, BRETT D 1970 MASSASOIT RD DIGHTON, MA 02715-
CAMA Number:	017.0-0209-0001.0		
Property Address:	1970 MASSASOIT RD		
Parcel Number:	017.0-0209-0002.0	Mailing Address:	ST. GERMAIN, NICHOLAS & ALAINA 1940 MASSASOIT RD DIGHTON, MA 02715-
CAMA Number:	017.0-0209-0002.0		
Property Address:	1940 MASSASOIT RD		

300 feet Abutters List Report

Dighton, MA
January 21, 2025

Parcel Number:	017.0-0209-0003.0	Mailing Address:	TOOLIN TIMOTHY AND SUSAN TRUSTEES OF THE TOOLI 1943 MASSASOIT RD DIGHTON, MA 02715-
CAMA Number:	017.0-0209-0003.0		
Property Address:	1943 MASSASOIT RD		
Parcel Number:	017.0-0209-0003.D	Mailing Address:	COUNCIL OAK ESTATES TRUST 2000 MANONET AVE DIGHTON, MA 02715-
CAMA Number:	017.0-0209-0003.D		
Property Address:	0 MANOMET AV		
Parcel Number:	017.0-0209-0004.0	Mailing Address:	AGRESTI MICHELLE L 1953 MASSASOIT RD DIGHTON, MA 02715-
CAMA Number:	017.0-0209-0004.0		
Property Address:	1953 MASSASOIT RD		
Parcel Number:	017.0-0209-0004.D	Mailing Address:	COUNCIL OAK ESTATES TRUST 2000 MANONET AVE DIGHTON, MA 02715-
CAMA Number:	017.0-0209-0004.D		
Property Address:	0 COUNCIL OAK WAY		
Parcel Number:	017.0-0209-0005.0	Mailing Address:	QUINN JASON R & LEAH K 758 COUNCIL OAK WAY DIGHTON, MA 02715-
CAMA Number:	017.0-0209-0005.0		
Property Address:	758 COUNCIL OAK WAY		
Parcel Number:	017.0-0209-0005.D	Mailing Address:	COUNCIL OAK ESTATES TRUST 2000 MANONET AVE DIGHTON, MA 02715-
CAMA Number:	017.0-0209-0005.D		
Property Address:	0 MASSASOIT RD		
Parcel Number:	017.0-0209-0007.0	Mailing Address:	GOSTANIAN, BRENDA L 761 COUNCIL OAK WAY DIGHTON, MA 02715-
CAMA Number:	017.0-0209-0007.0		
Property Address:	761 COUNCIL OAK WAY		
Parcel Number:	017.0-0209-0008.0	Mailing Address:	STEBBINS, JACOB M & DANIELLE K 751 COUNCIL OAK WAY DIGHTON, MA 02715-
CAMA Number:	017.0-0209-0008.0		
Property Address:	751 COUNCIL OAK WAY		
Parcel Number:	017.0-0209-0009.0	Mailing Address:	GRACIA, SHANNON MARIE & LUIS CARLOS 741 COUNCIL OAK WAY DIGHTON, MA 02715-
CAMA Number:	017.0-0209-0009.0		
Property Address:	741 COUNCIL OAK WAY		
Parcel Number:	017.0-0209-0012.0	Mailing Address:	VARELA JOAO ADALGIZA 2040 MANOMET AVE DIGHTON, MA 02715-
CAMA Number:	017.0-0209-0012.0		
Property Address:	2040 MANOMET AV		
Parcel Number:	017.0-0209-0013.0	Mailing Address:	ROSARIO, RAYMOND J & SANDRA 742 COUNCIL OAK WAY DIGHTON, MA 02715-
CAMA Number:	017.0-0209-0013.0		
Property Address:	742 COUNCIL OAK WAY		
Parcel Number:	017.0-0209-0014.0	Mailing Address:	KING, GRANT J & MEGAN G 2010 MANOMET AVE DIGHTON, MA 02715-
CAMA Number:	017.0-0209-0014.0		
Property Address:	2010 MANOMET AV		

300 feet Abutters List Report

Dighton, MA
January 21, 2025

Parcel Number:	017.0-0209-0015.0	Mailing Address:	GRADY MICHAEL J KRISTEN L 2000 MANOMET AVE DIGHTON, MA 02715-
CAMA Number:	017.0-0209-0015.0		
Property Address:	2000 MANOMET AV		
Parcel Number:	017.0-0209-0016.0	Mailing Address:	ROCHA, KENNETH JR & SHANTEL 2001 MANOMET AVE DIGHTON, MA 02715-
CAMA Number:	017.0-0209-0016.0		
Property Address:	2001 MANOMET AV		
Parcel Number:	017.0-0209-0017.0	Mailing Address:	SYLVESTER, WILLIAM & STEPHANIE 2011 MANOMET AVE DIGHTON, MA 02715-
CAMA Number:	017.0-0209-0017.0		
Property Address:	2011 MANOMET AV		
Parcel Number:	017.0-0209-0018.0	Mailing Address:	KELLEY JOHN T P O BOX 652 DIGHTON, MA 02715-
CAMA Number:	017.0-0209-0018.0		
Property Address:	2021 MANOMET AV		
Parcel Number:	017.0-0209-0019.0	Mailing Address:	GAMACHE, ERIC & EDWARDS, CORINNE 2031 MANOMET AVE DIGHTON, MA 02715-
CAMA Number:	017.0-0209-0019.0		
Property Address:	2031 MANOMET AV		
Parcel Number:	017.0-0305-0000.0	Mailing Address:	ROGERS, DAVID B & MELISSA A 1801 MILK ST DIGHTON, MA 02715-
CAMA Number:	017.0-0305-0000.0		
Property Address:	1801 MILK ST		
Parcel Number:	017.0-0306-0000.0	Mailing Address:	REYNOLDS, GWEN R 1771 MILK ST DIGHTON, MA 02715-
CAMA Number:	017.0-0306-0000.0		
Property Address:	1771 MILK ST		
Parcel Number:	017.0-0310-0000.0	Mailing Address:	LEWIS, COLLEEN M 1901 MILK ST DIGHTON, MA 02715-
CAMA Number:	017.0-0310-0000.0		
Property Address:	1901 MILK ST		
Parcel Number:	017.0-0311-0000.0	Mailing Address:	BUCO, CURRAN V & FONTAINE, JESSICA A 1881 MILK ST DIGHTON, MA 02715-
CAMA Number:	017.0-0311-0000.0		
Property Address:	1881 MILK ST		
Parcel Number:	017.0-0312-0000.0	Mailing Address:	CABRAL, DANIEL J 1835 MILK ST DIGHTON, MA 02715-
CAMA Number:	017.0-0312-0000.0		
Property Address:	1835 MILK ST		
Parcel Number:	017.0-0313-0000.0	Mailing Address:	LACHANCE, RAYMOND L & JUDITH M & DUSSEAULT, SARAH K 1841 MILK ST DIGHTON, MA 02715-
CAMA Number:	017.0-0313-0000.0		
Property Address:	1841 MILK ST		
Parcel Number:	017.0-0314-0000.0	Mailing Address:	GIUVA, MICHAEL J & CRYSTAL DAWN 1921 MILK ST DIGHTON, MA 02715-
CAMA Number:	017.0-0314-0000.0		
Property Address:	1921 MILK ST		

300 feet Abutters List Report

Dighton, MA
January 21, 2025

Parcel Number:	017.0-0316-0000.0	Mailing Address:	WILKINSON, JAMES R & KAREN S 1861 MILK ST DIGHTON, MA 02715-
CAMA Number:	017.0-0316-0000.0		
Property Address:	1861 MILK ST		
Parcel Number:	017.0-0323-0000.0	Mailing Address:	WHITEHOUSE, SHANE T & CELESTE M 1945 MILK ST DIGHTON, MA 02715-
CAMA Number:	017.0-0323-0000.0		
Property Address:	1945 MILK ST		
Parcel Number:	017.0-0324-0000.0	Mailing Address:	ANDRADE, CHRISTOPHER M & CHERYL A 1975 MILK ST DIGHTON, MA 02715-
CAMA Number:	017.0-0324-0000.0		
Property Address:	1975 MILK ST		

Not official unless stamped by
The Board of Assessors

Eric Easterday
Nancy Goulart
William Moore

THE ABOVE NAMES AND ADDRESSES HAVE BEEN CERTIFIED BY THE DIGHTON ASSESSORS OFFICE AS OF TODAY

Map 17 Lots 109& 135& 208

Town of Dighton, MA

1 inch = 562 Feet

300' abutters radius

0 562 1124 1686

January 21, 2025

CAI Technologies
Precision Mapping. Geospatial Solutions.

www.cai-tech.com

Data shown on this map is provided for planning and informational purposes only. The municipality and CAI Technologies are not responsible for any use for other purposes or misuse or misrepresentation of this map.

FORM M – RECEIPT FOR SPECIAL PERMIT APPLICATION

TOWN OF DIGHTON

PLANNING BOARD
979 SOMERSET AVENUE
DIGHTON, MA 02715

PETITIONER:
NAME: Bell Farm Estates LLC
ADDRESS: 843 Main Street Dighton MA 02715

LOCATION (from Assessors' Office)
PLAT AND MAP 17
LOT NOS. 109, 135 , and 208

PRESENT ZONING: Residential and Agriculture	First Record Date Planning Board Use Only
DATE OF THIS DOCUMENT: 3/3/25	File: Title:

RECEIPT FOR
SPECIAL PERMIT APPLICATION/SITE PLAN REVIEW

Application for approval for a Special Permit Application/Site Plan Review entitled:
Bell Farm Estates
Located at: 0 Milk Street and 0 Council Oak Way
has been made for approval to the Dighton Planning Board, and for which comments are requested by the following town agencies:

Received by the DIGHTON BOARD OF HEALTH
(Approval necessary in 45 days)
Elizabeth Monc
for the Dighton Board of Health
Date: 3/4/25

Received by the DIGHTON CONSERVATION COMMISSION for review
for Dighton Conservation Commission
Date: 3/4/25

Received by the DIGHTON WATER DISTRICT or NORTH DIGHTON WATER DISTRICT for review
(whichever applies)
Jason Soares
for Dighton Water District
Date: 3/4/25

Received by the DIGHTON FIRE DEPARTMENT
for the Dighton Fire Department
Date: 3/4/25

Received by the DIGHTON BOARD Of ASSESSORS for review
Stephan
for Dighton Board of Assessors
Date: 3/3/25

Received by the DIGHTON POLICE DEPARTMENT for review
for Dighton Police Department
Date: 03/04/25

Received by the BUILDING COMMISSIONER for review
for Building Commissioner
Date: 3/4/2025

This receipt is to be returned to the Dighton Planning Board by the person named above as submitting the copy of the application described within three (3) working days of the submittal date.

February 28, 2025

Jeff Carvalho
Chairman
Dighton Planning Board
979 Somerset Ave
Dighton, MA 02715

Subject: Definitive Subdivision Plans – Bell Farm Estates
0 Milk St & 0 Council Oak Way
Dighton, MA 02715
CEC Project Number 315-430

Dear Members of the Board:

On behalf of Bell Farm Estates LLC, Civil & Environmental Consultants, Inc. (CEC) herewith submits a Definitive Subdivision application and supporting information for the proposed development project located at 0 Milk Street and 0 Council Oak Way.

Bell Farm Estates LLC is proposing to create a conventional subdivision with 26 single family homes on Assessors Map 76 Lots 109, 135, and 208. The Subdivision, to be known as Bell Farm Estates, will consist of public roads, drainage facilities, individual septic systems on the house lots, and associated infrastructure to be owned and maintained by the Town of Dighton. The project will result in approximately 3,500 linear feet of roadway and associated infrastructure.

Submission Materials

In support of the aforementioned project, the following materials have been provided for your review:

- Three (3) copies of the Form C – Application of Approval of a Definitive Plan
- Four (4) copies of the Definitive Subdivision Plans dated February 2025, prepared by CEC
- Form E – Certified List of Abutters
- Tax Status Application Form
- Form M – Receipt for Subdivision Plan Form
- Form R – Subdivision Waiver Request
- Four (4) copies of the Stormwater Report, prepared by CEC, dated February 2025

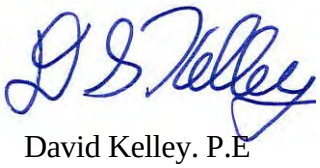
The following fees have also been provided:

- **Filing fee**: $1,000 + $250 per lot filing fee = $1,000 + $250 x 26 lots = $7,500
- **Project Review**:
    - More than 25 Lots= $25,000

We appreciate your consideration of the enclosed Definitive Subdivision Application. Please contact the undersigned if you have any questions or comments on the submitted materials.

Sincerely,

CIVIL & ENVIRONMENTAL CONSULTANTS, INC.



Chris Vandenberghe, P.E.
Project Manager

David Kelley. P.E
Principal

Cc: Carl Rebello (Bell Farm Estates LLC)

FORM C- APPLICATION OF APPROVAL OF A DEFINITIVE SUBDIVISION

TOWN OF DIGHTON

PLANNING BOARD
979 SOMERSET AVENUE
DIGHTON, MA 02715

05-25

PETITIONER: Bell Farm Estates LLC
NAME: Carl Rebello
ADDRESS: 843 Main Street Dighton MA 02715

LOCATION (from Assessors' Office) PLAT AND MAP 17 LOT NOS. 109, 135 , and 208	
PRESENT ZONING Residential and Agriculture	First Record Date Planning Board Use Only
DATE OF THIS DOCUMENT 03/3/25	File: Title:

FORM C
APPLICATION FOR APPROVAL OF DEFINITIVE SUDIVISION PLAN

File three (3) completed copies of this application. One (1) copy with the Planning Board, one (1) copy with the Town Clerk and one (1) copy with the Board of Health in accordance with the Rules and Regulations Governing Subdivisions.

To the Dighton Planning Board:

The undersigned, being the applicant as defined under Chapter 41, §81L, for approval of a proposed subdivision shown on a plan entitled: Definitive Subdivision "Bell Farm Estates" by Civil & Environmental Consultants, Inc. dated January, 2025 and described as follows: _____ located on assessors parcels shown as Map 17 Lots 109, 135 and 208 number of lots proposed 26, total acreage of tract 42.43 acres hereby submits said plan as a **DEFINITIVE** plan in accordance with the Rules and Regulations of the Dighton Planning Board and makes application to the Board for approval of said plan.

The undersigned's title to said land is derived from Andre B. Soares, Joseph S. Mozzone, Dighton Development, LLC by deed dated November 25th, 2019, January 21st, 2021, January 31st 2019 and recorded in the Bristol County District Registry of Deeds Book 25569,27672,24967, Page 87, 115, 24, registered in the Bristol County Registry District of the Land Court, Certificate of Title No. N/A; and said land is free of encumbrances except for the following: N/A

Said plan has (X) has not ( ) evolved from a preliminary plan submitted to the Board on November 16th, 2022 and was with withdrawn on April 25th, 2023 prior to a decision of approval or disapproval from the Board.

The undersigned hereby applies for the approval of said **DEFINITIVE** plan by the Board, in belief that the plan conforms to the Board's Rules and Regulations.

RECEIVED
Received by the Planning Board
Date: MAR - 4 2025
Time: _____
Payment Received: _____
By: Dighton Planning Board
Signature: _____

Applicant's Name: Carl Rebello
Applicant's Address: 843 main St
Dighton Ma. 02715
Applicant's Phone#: 508 3284723
Applicant's Email: carl@rebelloconstruction.com
Signature: Carl Rebello

Received by the Town Clerk
Date: _____
Time: _____
Payment Received: _____
Signature: _____

Owner's name, address and signature for authorization (if other than applicant)
Owner's Name: _____
Owner's Address: _____
_____
Signature: _____
Owner's Phone#: _____
Owner's Email: _____
Signature: _____

Received by the Board of Health
Date: _____
Time: _____
Signature: _____

Checklist of items to be submitted with application.

1. ✓ Application Form (x3) and any other required forms on file with the Board
2. ✓ Plans (4 Prints) & electronic version in .pdf format
3. ✓ Statements as required in Sections 3330 & 3340
4. ✓ Application Fee (please refer to Fee Schedule)
5. ✓ Project Review Fee (please refer to Fee Schedule) & completed W-9
6. ✓ Certified Abutters List (obtained from the Assessor's Office)
7. ✓ Tax Status Application Form
8. ___ Form M Receipt for Subdivision Plan

Note: The above checklist is only a recommendation. None of the above items can be required unless specifically required by the Planning Board's Rules and Regulations.

RECEIVED
Town Clerk-Dighton, MA
MAR 04 2025
Time: 3:09 PM
By: _____

FORM E – CERTIFIED ABUTTERS LIST

300 feet Abutters List Report

Dighton, MA
January 21, 2025

Subject Properties:

Parcel Number:	017.0-0109-0000.0	Mailing Address:	BELL FARM ESTATE, LLC
CAMA Number:	017.0-0109-0000.0		843 MAIN ST
Property Address:	0 MILK ST		DIGHTON, MA 02715-
Parcel Number:	017.0-0135-0000.0	Mailing Address:	BELL FARMS ESTATE LLC
CAMA Number:	017.0-0135-0000.0		843 MAIN ST
Property Address:	0 COUNCIL OAK WAY		DIGHTON, MA 02715-
Parcel Number:	017.0-0208-0000.0	Mailing Address:	BELL FARM ESTATES LLC
CAMA Number:	017.0-0208-0000.0		843 MAIN ST
Property Address:	0 MILK ST		DIGHTON, MA 02715-

Abutters:

Parcel Number:	016.0-0063-0000.0	Mailing Address:	KENNETH J PACHECO AND CHRISTINE M PACHECO IRRE
CAMA Number:	016.0-0063-0000.0		1860 MILK ST
Property Address:	1860 MILK ST		DIGHTON, MA 02715-
Parcel Number:	016.0-0069-0000.0	Mailing Address:	HEBERT THOMAS G & TRACEY A
CAMA Number:	016.0-0069-0000.0		1935 BUCK PLAIN RD
Property Address:	1935 BUCK PLAIN RD		DIGHTON, MA 02715-
Parcel Number:	016.0-0070-0000.0	Mailing Address:	HAYDEN, KEITH R & DEBORAH A
CAMA Number:	016.0-0070-0000.0		1925 BUCK PLAIN RD
Property Address:	1925 BUCK PLAIN RD		DIGHTON, MA 02715-
Parcel Number:	016.0-0071-0000.0	Mailing Address:	CAREPA, JOSEPH M & MARIA G
CAMA Number:	016.0-0071-0000.0		835 WHITMARSH LN
Property Address:	835 WHITMARSH LN		DIGHTON, MA 02715-
Parcel Number:	016.0-0117-0000.0	Mailing Address:	MORIERA, JAMES P & ELIZABETH M
CAMA Number:	016.0-0117-0000.0		1800 MILK ST
Property Address:	1800 MILK ST		DIGHTON, MA 02715-
Parcel Number:	016.0-0118-0000.0	Mailing Address:	CLOONAN, JEFFREY S & ELIZABETH A
CAMA Number:	016.0-0118-0000.0		1780 MILK ST
Property Address:	1780 MILK ST		DIGHTON, MA 02715-
Parcel Number:	016.0-0119-0000.0	Mailing Address:	ALLEN, RUSSELL R & MARIA
CAMA Number:	016.0-0119-0000.0		811 BROOK ST
Property Address:	811 BROOK ST		DIGHTON, MA 02715-

300 feet Abutters List Report

Dighton, MA
January 21, 2025

Parcel Number:	016.0-0119-0001.0	Mailing Address:	DANIEL, MILLAN & SILVA, MIKAYLA ELIZABETH 1724 MILK ST UNIT A DIGHTON, MA 02715-
CAMA Number:	016.0-0119-0001.0		
Property Address:	1724 MILK ST		
Parcel Number:	016.0-0120-0000.0	Mailing Address:	BEAUSOLEIL, SHEILA A 1820 MILK ST DIGHTON, MA 02715-
CAMA Number:	016.0-0120-0000.0		
Property Address:	1820 MILK ST		
Parcel Number:	016.0-0124-0000.0	Mailing Address:	LOUBEAU, KERLY & PIERRE 1840 MILK ST DIGHTON, MA 02715-
CAMA Number:	016.0-0124-0000.0		
Property Address:	1840 MILK ST		
Parcel Number:	016.0-0125-0000.0	Mailing Address:	SOARES, RODNEY A & WENDY A 1960 MILK ST DIGHTON, MA 02715-
CAMA Number:	016.0-0125-0000.0		
Property Address:	1960 MILK ST		
Parcel Number:	016.0-0126-0000.0	Mailing Address:	HATTON, ROBERT B JR & CHRISTINE M, LE 1940 MILK ST DIGHTON, MA 02715-
CAMA Number:	016.0-0126-0000.0		
Property Address:	1940 MILK ST		
Parcel Number:	016.0-0127-0000.0	Mailing Address:	TAVARES, MARC J & JESSICA P 1920 MILK ST DIGHTON, MA 02715-
CAMA Number:	016.0-0127-0000.0		
Property Address:	1920 MILK ST		
Parcel Number:	016.0-0128-0000.0	Mailing Address:	GAILES FAMILY REVOCABLE TRUST GAILES JOSEPH R & PATRICIA M TRUSTEES 825 WHITMARSH LN DIGHTON, MA 02715-
CAMA Number:	016.0-0128-0000.0		
Property Address:	825 WHITMARSH LN		
Parcel Number:	016.0-0129-0000.0	Mailing Address:	CABRAL, PEDRO JR & SANDRA M TRUSTEES OF THE CABRAL LIVING TRUST 820 WHITMARSH LN DIGHTON, MA 02715-
CAMA Number:	016.0-0129-0000.0		
Property Address:	820 WHITMARSH LN		
Parcel Number:	016.0-0131-0000.0	Mailing Address:	MELLO, TAMMY A 841 BROOK ST DIGHTON, MA 02715-
CAMA Number:	016.0-0131-0000.0		
Property Address:	841 BROOK ST		
Parcel Number:	016.0-0133-0001.0	Mailing Address:	SIMOES JEFFREY & ARRUDA DESARE JOSELYN 1740 MILK ST DIGHTON, MA 02715-
CAMA Number:	016.0-0133-0001.0		
Property Address:	1740 MILK ST		
Parcel Number:	016.0-0133-0002.0	Mailing Address:	COWELL, WILLIAM III & MARCY P 1760 MILK ST DIGHTON, MA 02715-
CAMA Number:	016.0-0133-0002.0		
Property Address:	1760 MILK ST		
Parcel Number:	017.0-0109-0000.A	Mailing Address:	DIGHTON, TOWN OF 979 SOMERSET AVE DIGHTON, MA 02715-
CAMA Number:	017.0-0109-0000.A		
Property Address:	0 ELM ST		

300 feet Abutters List Report

Dighton, MA
January 21, 2025

Parcel Number:	017.0-0130-0000.0	Mailing Address:	K J ARAUJO, LTD PO BOX 643 DIGHTON, MA 02715-
CAMA Number:	017.0-0130-0000.0		
Property Address:	0 MAIN ST		
Parcel Number:	017.0-0136-0000.0	Mailing Address:	DIGHTON, TOWN OF CONSERVATION COMMISSION 979 SOMERSET AVE DIGHTON, MA 02715-
CAMA Number:	017.0-0136-0000.0		
Property Address:	0 COUNCIL OAK WAY		
Parcel Number:	017.0-0137-0000.A	Mailing Address:	DIGHTON, TOWN OF 979 SOMERSET AVE DIGHTON, MA 02715-
CAMA Number:	017.0-0137-0000.A		
Property Address:	0 MAIN ST		
Parcel Number:	017.0-0138-0000.0	Mailing Address:	SOMERSET, TOWN OF 140 WOOD ST SOMERSET, MA 02726-
CAMA Number:	017.0-0138-0000.0		
Property Address:	0 BROOK ST		
Parcel Number:	017.0-0141-0000.0	Mailing Address:	SOMERSET, TOWN OF 140 WOOD ST SOMERSET, MA 02726-
CAMA Number:	017.0-0141-0000.0		
Property Address:	581 BROOK ST		
Parcel Number:	017.0-0164-0000.0	Mailing Address:	ZENECA INC ATTN: L. ALTOMONTE P.O. BOX 15437 WILMINGTON, DE 19850-5437
CAMA Number:	017.0-0164-0000.0		
Property Address:	0 MAIN ST		
Parcel Number:	017.0-0203-0000.0	Mailing Address:	GARCIA, JAMES 1735 MILK ST DIGHTON, MA 02715-
CAMA Number:	017.0-0203-0000.0		
Property Address:	1735 MILK ST		
Parcel Number:	017.0-0205-0000.0	Mailing Address:	MENDOZA, WILLIAM JOHN & DONNA M 1721 MILK ST DIGHTON, MA 02715-
CAMA Number:	017.0-0205-0000.0		
Property Address:	1721 MILK ST		
Parcel Number:	017.0-0206-0000.0	Mailing Address:	JOLY, PAUL R & JUDITH A 707 BROOK ST DIGHTON, MA 02715-
CAMA Number:	017.0-0206-0000.0		
Property Address:	707 BROOK ST		
Parcel Number:	017.0-0207-0000.0	Mailing Address:	JOLY, PAUL R & JUDITH A 707 BROOK ST DIGHTON, MA 02715-
CAMA Number:	017.0-0207-0000.0		
Property Address:	0 BROOK ST		
Parcel Number:	017.0-0209-0001.0	Mailing Address:	KIMBALL, BRETT D 1970 MASSASOIT RD DIGHTON, MA 02715-
CAMA Number:	017.0-0209-0001.0		
Property Address:	1970 MASSASOIT RD		
Parcel Number:	017.0-0209-0002.0	Mailing Address:	ST. GERMAIN, NICHOLAS & ALAINA 1940 MASSASOIT RD DIGHTON, MA 02715-
CAMA Number:	017.0-0209-0002.0		
Property Address:	1940 MASSASOIT RD		

300 feet Abutters List Report

Dighton, MA
January 21, 2025

Parcel Number:	017.0-0209-0003.0	Mailing Address:	TOOLIN TIMOTHY AND SUSAN TRUSTEES OF THE TOOLI 1943 MASSASOIT RD DIGHTON, MA 02715-
CAMA Number:	017.0-0209-0003.0		
Property Address:	1943 MASSASOIT RD		
Parcel Number:	017.0-0209-0003.D	Mailing Address:	COUNCIL OAK ESTATES TRUST 2000 MANONET AVE DIGHTON, MA 02715-
CAMA Number:	017.0-0209-0003.D		
Property Address:	0 MANOMET AV		
Parcel Number:	017.0-0209-0004.0	Mailing Address:	AGRESTI MICHELLE L 1953 MASSASOIT RD DIGHTON, MA 02715-
CAMA Number:	017.0-0209-0004.0		
Property Address:	1953 MASSASOIT RD		
Parcel Number:	017.0-0209-0004.D	Mailing Address:	COUNCIL OAK ESTATES TRUST 2000 MANONET AVE DIGHTON, MA 02715-
CAMA Number:	017.0-0209-0004.D		
Property Address:	0 COUNCIL OAK WAY		
Parcel Number:	017.0-0209-0005.0	Mailing Address:	QUINN JASON R & LEAH K 758 COUNCIL OAK WAY DIGHTON, MA 02715-
CAMA Number:	017.0-0209-0005.0		
Property Address:	758 COUNCIL OAK WAY		
Parcel Number:	017.0-0209-0005.D	Mailing Address:	COUNCIL OAK ESTATES TRUST 2000 MANONET AVE DIGHTON, MA 02715-
CAMA Number:	017.0-0209-0005.D		
Property Address:	0 MASSASOIT RD		
Parcel Number:	017.0-0209-0007.0	Mailing Address:	GOSTANIAN, BRENDA L 761 COUNCIL OAK WAY DIGHTON, MA 02715-
CAMA Number:	017.0-0209-0007.0		
Property Address:	761 COUNCIL OAK WAY		
Parcel Number:	017.0-0209-0008.0	Mailing Address:	STEBBINS, JACOB M & DANIELLE K 751 COUNCIL OAK WAY DIGHTON, MA 02715-
CAMA Number:	017.0-0209-0008.0		
Property Address:	751 COUNCIL OAK WAY		
Parcel Number:	017.0-0209-0009.0	Mailing Address:	GRACIA, SHANNON MARIE & LUIS CARLOS 741 COUNCIL OAK WAY DIGHTON, MA 02715-
CAMA Number:	017.0-0209-0009.0		
Property Address:	741 COUNCIL OAK WAY		
Parcel Number:	017.0-0209-0012.0	Mailing Address:	VARELA JOAO ADALGIZA 2040 MANOMET AVE DIGHTON, MA 02715-
CAMA Number:	017.0-0209-0012.0		
Property Address:	2040 MANOMET AV		
Parcel Number:	017.0-0209-0013.0	Mailing Address:	ROSARIO, RAYMOND J & SANDRA 742 COUNCIL OAK WAY DIGHTON, MA 02715-
CAMA Number:	017.0-0209-0013.0		
Property Address:	742 COUNCIL OAK WAY		
Parcel Number:	017.0-0209-0014.0	Mailing Address:	KING, GRANT J & MEGAN G 2010 MANOMET AVE DIGHTON, MA 02715-
CAMA Number:	017.0-0209-0014.0		
Property Address:	2010 MANOMET AV		

300 feet Abutters List Report

Dighton, MA
January 21, 2025

Parcel Number:	017.0-0209-0015.0	Mailing Address:	GRADY MICHAEL J KRISTEN L 2000 MANOMET AVE DIGHTON, MA 02715-
CAMA Number:	017.0-0209-0015.0		
Property Address:	2000 MANOMET AV		
Parcel Number:	017.0-0209-0016.0	Mailing Address:	ROCHA, KENNETH JR & SHANTEL 2001 MANOMET AVE DIGHTON, MA 02715-
CAMA Number:	017.0-0209-0016.0		
Property Address:	2001 MANOMET AV		
Parcel Number:	017.0-0209-0017.0	Mailing Address:	SYLVESTER, WILLIAM & STEPHANIE 2011 MANOMET AVE DIGHTON, MA 02715-
CAMA Number:	017.0-0209-0017.0		
Property Address:	2011 MANOMET AV		
Parcel Number:	017.0-0209-0018.0	Mailing Address:	KELLEY JOHN T P O BOX 652 DIGHTON, MA 02715-
CAMA Number:	017.0-0209-0018.0		
Property Address:	2021 MANOMET AV		
Parcel Number:	017.0-0209-0019.0	Mailing Address:	GAMACHE, ERIC & EDWARDS, CORINNE 2031 MANOMET AVE DIGHTON, MA 02715-
CAMA Number:	017.0-0209-0019.0		
Property Address:	2031 MANOMET AV		
Parcel Number:	017.0-0305-0000.0	Mailing Address:	ROGERS, DAVID B & MELISSA A 1801 MILK ST DIGHTON, MA 02715-
CAMA Number:	017.0-0305-0000.0		
Property Address:	1801 MILK ST		
Parcel Number:	017.0-0306-0000.0	Mailing Address:	REYNOLDS, GWEN R 1771 MILK ST DIGHTON, MA 02715-
CAMA Number:	017.0-0306-0000.0		
Property Address:	1771 MILK ST		
Parcel Number:	017.0-0310-0000.0	Mailing Address:	LEWIS, COLLEEN M 1901 MILK ST DIGHTON, MA 02715-
CAMA Number:	017.0-0310-0000.0		
Property Address:	1901 MILK ST		
Parcel Number:	017.0-0311-0000.0	Mailing Address:	BUCO, CURRAN V & FONTAINE, JESSICA A 1881 MILK ST DIGHTON, MA 02715-
CAMA Number:	017.0-0311-0000.0		
Property Address:	1881 MILK ST		
Parcel Number:	017.0-0312-0000.0	Mailing Address:	CABRAL, DANIEL J 1835 MILK ST DIGHTON, MA 02715-
CAMA Number:	017.0-0312-0000.0		
Property Address:	1835 MILK ST		
Parcel Number:	017.0-0313-0000.0	Mailing Address:	LACHANCE, RAYMOND L & JUDITH M & DUSSEAULT, SARAH K 1841 MILK ST DIGHTON, MA 02715-
CAMA Number:	017.0-0313-0000.0		
Property Address:	1841 MILK ST		
Parcel Number:	017.0-0314-0000.0	Mailing Address:	GIUVA, MICHAEL J & CRYSTAL DAWN 1921 MILK ST DIGHTON, MA 02715-
CAMA Number:	017.0-0314-0000.0		
Property Address:	1921 MILK ST		

300 feet Abutters List Report

Dighton, MA
January 21, 2025

Parcel Number:	017.0-0316-0000.0	Mailing Address:	WILKINSON, JAMES R & KAREN S 1861 MILK ST DIGHTON, MA 02715-
CAMA Number:	017.0-0316-0000.0		
Property Address:	1861 MILK ST		
Parcel Number:	017.0-0323-0000.0	Mailing Address:	WHITEHOUSE, SHANE T & CELESTE M 1945 MILK ST DIGHTON, MA 02715-
CAMA Number:	017.0-0323-0000.0		
Property Address:	1945 MILK ST		
Parcel Number:	017.0-0324-0000.0	Mailing Address:	ANDRADE, CHRISTOPHER M & CHERYL A 1975 MILK ST DIGHTON, MA 02715-
CAMA Number:	017.0-0324-0000.0		
Property Address:	1975 MILK ST		

Not official unless stamped by
The Board of Assessors

Eric Easterday
Nancy Goulart
William Moore

THE ABOVE NAMES AND ADDRESSES HAVE BEEN CERTIFIED BY THE DIGHTON ASSESSORS OFFICE AS OF TODAY

Map 17 Lots 109& 135& 208

Town of Dighton, MA

300' abutters radius 1 inch = 562 Feet

CAI Technologies
Precision Mapping. Geospatial Solutions.
www.cai-tech.com

January 21, 2025

0 562 1124 1686

Data shown on this map is provided for planning and informational purposes only. The municipality and CAI Technologies are not responsible for any use for other purposes or misuse or misrepresentation of this map.

TAX STATUS APPLICATION FORM

Town of Dighton, Massachusetts

TAX STATUS APPLICATION FORM

In order to process your application request efficiently and promptly we ask that you provide us with the following information. **One form must be filled out completely for each parcel(s) owned by you and any other parties involved.**

Date of request: March 3rd, 2025
Requested by:
Name: Bell Farm Estates LLC
Address: 843 Main Street Dighton MA
Telephone Number: 508-328-4723
Assessed Owner: Bell Farm Estates LLC
Current Owner: Bell Farm Estates LLC
(If different from the Assessed owner)

Scope of Work: Conventional Subdivision

Property Address: 0 Milk Street and 0 Council Oak Way

To Be *Completed* and *Initialed* by the Assessors Office

Assessor's Reference (M&L):___-____-_____

If a developer or contractor is involved in this project then this section must be completed.

Contractor/Business Name _____ Business ID_____
Business Address _____ Phone Number_____
Contact person _____

(SIGNATURE REQUIRED TO COMPLETE TAX STATUS)
I hereby attest that all the information provided herein is true and complete to the best of my knowledge.

_____ Petitioner

RECEIVED
MAR 04 2025
By

For Office use only:
Tax Office Initials ASD

*Real Estate	Amt. Due 0
*Personal Property	Amt. Due 0
*Motor Vehicle	Amt. Due 0
*Tax Title	Amt. Due 0

***As part of Article XXVII of Dighton's bylaws, we have adopted MGL Chapter40 Section 57 titled "Licenses & Permits of Delinquent Taxpayers".**

Please Note: You must contact the office that is requesting the Tax Status Report for any questions or information relating to this form.

FORM M – RECEIPT FOR SUBDIVISION PLAN

TOWN OF DIGHTON

PLANNING BOARD
979 SOMERSET AVENUE
DIGHTON, MA 02715

PETITIONER: Bell Farm Estates LLC
NAME: Carl Rebello
ADDRESS: 843 Main Street Dighton MA 02715

LOCATION (from Assessors' Office) PLAT AND MAP 17 LOT NOS. 109, 135 , and 208	
PRESENT ZONING Residential and Agriculture	First Record Date Planning Board Use Only
DATE OF THIS DOCUMENT 03/3/24	File: Title:

FORM M
RECEIPT FOR SUBDIVISION PLAN

Received from: _____ on _____, 20 ____,
A copy of Preliminary / Definitive Subdivision Plan entitled _____

_____

_____

Located at: _____.

Application for approval has been made to the Dighton Planning Board, and for which comments are requested by the following town agencies:

1. ~~Received by the Dighton Board of Health~~ Assessors Office — 3/3/25
2. Received by the Dighton Conservation Commission — date 3/4/25
3. Received by the Dighton Water District — date 3/4/25
4. Received by the North Dighton Fire District — date
5. ~~Received by the Dighton Sewer Commission~~ — date
6. Received by the Dighton Highway Department — date 3/3/25
7. Received by the Dighton Fire Department — date 3/3/25
8. Received by the Dighton Police Department — date 03/03/25
9. Received by the Town Clerk's Office — date
10. Received by the Building Inspector's Office — date 3/3/25
11. Received by the Electric Light Commission — date 3/4/25
12. ~~Sent to Planning Board's Engineer~~ — date

This receipt is to be returned to the Dighton Planning Board by the person named above as submitting the copy of the plan described within two working days of the above date.

FORM R – SUBDIVISION WAIVER REQUEST

TOWN OF DIGHTON

PLANNING BOARD
979 SOMERSET AVENUE
DIGHTON, MA 02715

PETITIONER: Bell Farm Estates LLC
NAME: Carl Rebello
ADDRESS: 843 Main Street Dighton MA 02715

LOCATION (from Assessors' Office)
PLAT AND MAP 17
LOT NOS. 109, 135 , and 208

PRESENT ZONING Residential and Agriculture	First Record Date Planning Board Use Only
DATE OF THIS DOCUMENT	File: Title:

FORM R
SUBDIVISION WAIVER REQUEST

Nature of Waiver: TO ALLOW A LOCUS MAP AT 1"=400' RATHER THAN 1"=1000'.

Subdivision Rules and Regulation Reference: 3320.b

Reason the waiver is requested: PREPARING THE LOCUS MAP AT A SCALE OF 1"=400' PROVIDES GREATER CLARITY OF THIS PARTICULAR SITE.

Alternatives to granting the waiver: SHOWING THE LOCUS MAP AT A SCALE OF 1"=1000' WITH LESS CLARITY OF THE PROJECT AREA AND THE ABUTTING PROPERTIES.

Impact of waiver denial on the project: SHOWING THE LOCUS MAP AT A SCALE OF 1"=1000' WITH LESS CLARITY OF THE PROJECT AREA AND THE ABUTTING PROPERTIES.

Reasons this waiver is in the best interests of the town and consistent with the intent and purpose of the Subdivision Control Law: GRANTNG OF THIS WAIVER WILL PROVIDE BETTER CLARITY OF THE PROJECT AREA AND THE ABUTTING PROPERTIES WHICH ALLOWS REVIEWERS TO BETTER SEE HOW THE PROJECT RELATES TO THE ABUTTING PROPERTIES.

Prepared by: CHRIS VANDENBERGHE Date: FEBRUARY 2025

Subdivision: BELL FARM ESTATES

Signed:

Rev. 8/2021

TOWN OF DIGHTON

PLANNING BOARD
979 SOMERSET AVENUE
DIGHTON, MA 02715

PETITIONER: Bell Farm Estates LLC
NAME: Carl Rebello
ADDRESS: 843 Main Street Dighton MA 02715

LOCATION (from Assessors' Office)
PLAT AND MAP 17
LOT NOS. 109, 135 , and 208

PRESENT ZONING Residential and Agriculture	First Record Date Planning Board Use Only
DATE OF THIS DOCUMENT	File: Title:

FORM R
SUBDIVISION WAIVER REQUEST

Nature of Waiver: TO ALLOW USE OF NAVD88 DATUM RATHER THAN THE USE OF USGS DATUM.

Subdivision Rules and Regulation Reference: 3320.j

Reason the waiver is requested: NAVD88 IS THE STANDARD VERTICAL DATUM FOR STATE COORDINATES INCLUDING FEMA FLOOD ELEVATIONS.

Alternatives to granting the waiver: THE USGS DATUM IWOULD BE USED.

Impact of waiver denial on the project: CURRENT DATUM OF THE PROJECT IS NAVD88, USING THE USGS DATUM WOULD REQUIRE THAT ALL ELEVATIONS AND ELEVATION REFERENCES BE CONVERTED, REVISED AND AMENDED INCLUDING THE FEMA FLOOD ELEVATIONS.

Reasons this waiver is in the best interests of the town and consistent with the intent and purpose of the Subdivision Control Law: GRANTNG OF THIS WAIVER WILL ALIGN BEST WITH THE CURRENT DATUM THAT THE VAST MAJORITY OF ENGINEERING AND LAND SURVEYING COMPANIES USE WITHIN THE STATE OF MASSACHUSETTS.

Prepared by: CHRIS VANDENBERGHE Date: FEBRUARY 2025

Subdivision: BELL FARM ESTATES

Signed:

Rev. 8/2021

TOWN OF DIGHTON

PLANNING BOARD
979 SOMERSET AVENUE
DIGHTON, MA 02715

PETITIONER: Bell Farm Estates LLC
NAME: Carl Rebello
ADDRESS: 843 Main Street Dighton MA 02715

LOCATION (from Assessors' Office)	
PLAT AND MAP 17	
LOT NOS. 109, 135 , and 208	
PRESENT ZONING Residential and Agriculture	First Record Date Planning Board Use Only
DATE OF THIS DOCUMENT	File: Title:

FORM R
SUBDIVISION WAIVER REQUEST

Nature of Waiver: TEST PITS LOCATION AND LOGS WITNESSED BY THE BOARD OF HEALTH SHALL BE SHOWN WITH NOT LESS THAN TWO (2) PITS PER LOT.

Subdivision Rules and Regulation Reference: 3320.w

Reason the waiver is requested: TEST PITS WERE PERFORMED ON SOME OF THE LOTS BETWEEN 2022 AND 2024 TO DETERMINE GENERAL SOIL TYPES THROUGHOUT THE SUBDIVISION, BUT THEY WERE PERFORMED MOSTLY TO DETERMINE LOCATIONS FOR STORMWATER MANAGEMENT DEVICES. TEST PITS WILL BE PERFORMED ON EACH INDIVIDUAL LOT AS A PART OF THE DESIGN OF EACH INDIVIDUAL SEPTIC SYSTEM DESIGN.

Alternatives to granting the waiver: PERFORM MORE TEST PITS ON THE PROPERTY BASED ON THE FINAL LOT LAYOUT.

Impact of waiver denial on the project: REQUIRNG TEST PITS ON EACH LOT WILL DELAY THE INITIAL SUBMISSION OF THE PROJECT FOR REVIEW.

Reasons this waiver is in the best interests of the town and consistent with the intent and purpose of the Subdivision Control Law: TEST PITS WERE PERFORMED ON SOME OF THE LOTS BETWEEN 2022 AND 2024 TO DETERMINE GENERAL SOIL TYPES THROUGHOUT THE SUBDIVISION AND FOR THE STORMWATER DESIGN.

WHEN THE SUBDIVISION IS APPROVED, TEST PITS CAN BE PERFORMED ON EACH OF THE INDIVIDUAL LOTS, IN THE SPECIFIC LOCATIONS OF THE SEPTIC SYSTEMS WITHOUT PERFORMING UNNECESSARY EXCAVATIONS AND DISTURBANCE TO THE PROPERTIES.

Prepared by: CHRIS VANDENBERGHE Date: FEBRUARY 2025

Subdivision: BELL FARM ESTATES

Signed:

Rev. 8/2021

TOWN OF DIGHTON

PLANNING BOARD
979 SOMERSET AVENUE
DIGHTON, MA 02715

PETITIONER: Bell Farm Estates LLC
NAME: Carl Rebello
ADDRESS: 843 Main Street Dighton MA 02715

LOCATION (from Assessors' Office)
PLAT AND MAP 17
LOT NOS. 109, 135 , and 208

PRESENT ZONING Residential and Agriculture	First Record Date Planning Board Use Only
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FORM R
SUBDIVISION WAIVER REQUEST

Nature of Waiver: WAIVE REQUIREMENT FOR ENGINEERS ESTIMATE OF MATERIALS WITH QUANTITIES REQUIRED TO CONSTRUCT ROADWAY, UTILITIES AND APPURTENANCES.

Subdivision Rules and Regulation Reference: 3320.aa

Reason the waiver is requested: IT IS THE RESPONSIBILITY OF THE DEVELOPER TO GET AN ESTIMATE OF THE QUANITITIES REQUIRED TO CONSTRUCT THE ROADWAY UTILITIES AND APPURTENANCES.

Alternatives to granting the waiver: REQUIRE AN ENGINEERS ESTIMATE TO BE SUBMITTED TO THE PLANNING BOARD.

Impact of waiver denial on the project: THE OWNER WOULD HAVE TO PROVIDE AN EINGINEERS ESTIMATE OF MATERIALS WITH QUANTITIES TO THE PLANNING BOARD.

Reasons this waiver is in the best interests of the town and consistent with the intent and purpose of the Subdivision Control Law: THE DEVELOPER/ APPLICANT WILL UTILIZE MATERIALS AND QUANTITIES CONSISTENT WITH THE TOWN OF TOWN DIGHTON LOCAL REGULATIONS REGARDING CONSTRUCTION. THE MATERIALS TO BE USED FOR THE PROJECT ARE TO MEET THE TOWN OF DIGHTON SPECIFICATIONS. THE ESITMATE OF QUANTITIES DOES NOT CHANGE THE DEVELOPERS OBLIGATION TO UTILIZE SUCH MATERIALS.

Prepared by: CHRIS VANDENBERGHE Date: FEBRUARY 2025

Subdivision: BELL FARM ESTATES

Signed:

Rev. 8/2021

TOWN OF DIGHTON

PLANNING BOARD
979 SOMERSET AVENUE
DIGHTON, MA 02715

PETITIONER: Bell Farm Estates LLC
NAME: Carl Rebello
ADDRESS: 843 Main Street Dighton MA 02715

LOCATION (from Assessors' Office)
PLAT AND MAP 17
LOT NOS. 109, 135 , and 208

PRESENT ZONING Residential and Agriculture	First Record Date Planning Board Use Only
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FORM R
SUBDIVISION WAIVER REQUEST

Nature of Waiver: TO WAIVE REQUIREMENT FOR DEVELOPMENT IMPACT STATEMENT

Subdivision Rules and Regulation Reference: 3340

Reason the waiver is requested: THE PROPOSED SUBDIVISON IS IN HARMONY WITH THE SURROUNDING NEIGHBORHOOD.

Alternatives to granting the waiver: THE OWNER WOULD BE REQUIRED TO INCUR THE COST FOR AN ENGINEER TO PREPARE AND SUBMIT A DEVELOPMENT IMPACT STATEMENT CONSISTENT WITH THE REQUIRMENTS IN SECTION 3340.

Impact of waiver denial on the project: THE OWNER WOULD BE REQUIRED TO INCUR THE COST FOR AN ENGINEER TO PREPARE AND SUBMIT A DEVELOPMENT IMPACT STATEMENT CONSISTENT WITH THE REQUIRMENTS IN SECTION 3340.

Reasons this waiver is in the best interests of the town and consistent with the intent and purpose of the Subdivision Control Law: THE PROPOSED SUBDIVISON IS CONSISTENT WITH THE SURROUNDING NEIGHBORHOOD IN SCALE AND DESIGN. THE PROPOSED SUBDIVISION IS IN COMPLIANCE WITH THE TOWN SUBDIVISION REGULATIONS REGULATIONS.

Prepared by: CHRIS VANDENBERGHE Date: FEBRUARY 2025

Subdivision: BELL FARM ESTATES

Signed:

TOWN OF DIGHTON

PLANNING BOARD
979 SOMERSET AVENUE
DIGHTON, MA 02715

PETITIONER: Bell Farm Estates LLC
NAME: Carl Rebello
ADDRESS: 843 Main Street Dighton MA 02715

LOCATION (from Assessors' Office)
PLAT AND MAP 17
LOT NOS. 109, 135 , and 208

PRESENT ZONING Residential and Agriculture	First Record Date Planning Board Use Only
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FORM R
SUBDIVISION WAIVER REQUEST

Nature of Waiver: TO WAIVE REQUIREMENT THAT PROPOSED CENTERLINE GRADES WITHIN THE RIGHT OF WAY SHALL BE NO MORE THAN FIVE FEET BELOW OR ABOVE EXISTING GRADES.

Subdivision Rules and Regulation Reference: 4244

Reason the waiver is requested: THE PROPOSED SUBDIVISON WILL REQUIRE GREATER THAN 5 FEET OF FILL IN SOME AREAS DUE THE GENERAL FLAT TOPOGRAPHY OF THE SITE AND THE NEED FOR PROPERLY DESIGNED STORMWATER MANAGEMENT FACILITIES.

Alternatives to granting the waiver:

THE PROPOSED SUBDIVISON AND STORMWATER MANAGEMENT SYSTEM WOULD BE REDESIGNED TO REDUCE THE AMOUNT OF FILL TO LESS THAN FIVE FEET ABOVE EXISTING GRADES. THE FILLS GREATER THAN FIVE FEET ARE REQUIRED TO PROPERLY DESIGN THE STORMWATER MANAGEMENT DEVICES.

Impact of waiver denial on the project:

THE PROPOSED SUBDIVISON AND STORMWATER MANAGEMENT SYSTEM WOULD NOT PROVIDE A PROPERLY DESIGNED STORMWATER MANAGEMENT SYSTEM.

Reasons this waiver is in the best interests of the town and consistent with the intent and purpose of the Subdivision Control Law: GRANTING OF THIS WAIVER WILL PROVIDE A PROPERLY DESIGNED STORMWATER MANAGEMENT SYSTEM AND AN ECONOMICAL SOLUTION FOR THE PROJECT. THE FILL REQUIRED FOR THE PROJECT WILL CONFORM TO THE TOWNS SPECIFICATIONS AND WILL BE PLACED IN STRICT CONFORMANCE WITH INDUSTRY STANDARDS.

Prepared by: CHRIS VANDENBERGHE Date: FEBRUARY 2025

Subdivision: BELL FARM ESTATES

Signed:

Rev. 8/2021

TOWN OF DIGHTON

PLANNING BOARD
979 SOMERSET AVENUE
DIGHTON, MA 02715

PETITIONER: Bell Farm Estates LLC
NAME: Carl Rebello
ADDRESS: 843 Main Street Dighton MA 02715

LOCATION (from Assessors' Office)
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LOT NOS. 109, 135 , and 208

PRESENT ZONING Residential and Agriculture	First Record Date Planning Board Use Only
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FORM R
SUBDIVISION WAIVER REQUEST

Nature of Waiver: TO WAIVE REQUIREMENT THAT WITHIN THE BASIN, THERE SHALL BE A CHANNEL WITH A ONE PERCENT (1%) GRADE FROM THE INLET(S) TO THE OUTLET, THE CHANNEL LINE BEING EIGHT (8') FOOT WIDE, SIX (6") INCH DEEP CIRCULAR SWALE CONSTRUCTED OF SOD, OR WHEN VELOCITIES DICTATE, SIX (6") INCH TO TWELVE (12") INCHES OF MIXED RIPRAP STONE.

Subdivision Rules and Regulation Reference: 4325

Reason the waiver is requested: INFILTRATION BASINS ARE DESIGNED WITH FLAT BOTTOMS AND SO THAT THE OUTLETS ARE HIGHER THAN THE BASIN BOTTOM AS THEY WILL EXFILTRATE THE STORMWATER THROUGH THE SIDES AND BOTTOM OF THE BASIN. THERE ARE NO LOW FLOW OUTLETS IN THE BASINS.

Alternatives to granting the waiver: PROVIDING INFILTRATION BASINS WITH SLOPED BOTTOMS THAT DO NOT COMPLY WITH MASSACHUSETTS DEP STORMWATER MANAGEMENT GUIDELINES.

Impact of waiver denial on the project: PROVIDING INFILTRATION BASINS WITH SLOPED BOTTOMS THAT DO NOT COMPLY WITH MASSACHUSETTS DEP STORMWATER MANAGEMENT GUIDELINES.

Reasons this waiver is in the best interests of the town and consistent with the intent and purpose of the Subdivision Control Law: INFILTRATION BASINS ARE PREFERRED WHEN SITE PARAMETERS DICTATE AND DO NOT NECESSITATE SLOPED BOTTOMS OR CHANNELS TO AN OUTLET. THEY ALLOW FOR GROUNDWATER RECHARGE AND BECAUSE THIS SITE IS WITHIN A ZONE II, GROUNDWATER RECHARGE IS MUCH PREFERRED.

Prepared by: CHRIS VANDENBERGHE Date: FEBRUARY 2025

Subdivision: BELL FARM ESTATES

Signed: Chris Vandenberghe

Rev. 8/2021

TOWN OF DIGHTON

PLANNING BOARD
979 SOMERSET AVENUE
DIGHTON, MA 02715

PETITIONER: Bell Farm Estates LLC
NAME: Carl Rebello
ADDRESS: 843 Main Street Dighton MA 02715

LOCATION (from Assessors' Office)
PLAT AND MAP 17
LOT NOS. 109, 135 , and 208

PRESENT ZONING Residential and Agriculture	First Record Date Planning Board Use Only
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FORM R
SUBDIVISION WAIVER REQUEST

Nature of Waiver: TO WAIVE REQUIRMENT THAT BASIN SIDE SLOPES SHALL HAVE A SLOPE OF FIVE (5') FEET HORIZONTAL TO ONE (1') FOOT VERTICAL OR FLATTER AND THE OVERALL SHAPE OF THE BASIN SHALL FIT THE TOPOGRAPHY AS NEARLY AS POSSIBLE.

Subdivision Rules and Regulation Reference: 4327

Reason the waiver is requested: THE PROPOSED INFILTRATION BASINS ARE PROPOSED TO HAVE SIDE SLOPES OF 3' HORIZONTAL TO 1' VERTICAL DUE TO PHYICAL SITE CONSTRAINTS AND THE REQUIRED BASIN VOLUME THAT IS REQUIRED FOR STORMWATER CAPTURE. IN ACCORDANCE WITH MASSDEP STORMWATER MANAGEMENT REGULATIONS, BASINS CAN BE DESIGNED WITH 3:1 SIDE SLOPES.

Alternatives to granting the waiver: THE DESIGN OF LARGER INFILTRATION BASINS WHICH WOULD CAUSE MORE LAND DISTURBANCE, INCLUDING TREE CLEARING.

Impact of waiver denial on the project: THE DESIGN OF LARGER INFILTRATION BASINS WHICH WOULD CAUSE MORE LAND DISTURBANCE, INCLUDING TREE CLEARING.

Reasons this waiver is in the best interests of the town and consistent with the intent and purpose of the Subdivision Control Law: THE INTENT OF THIS REGULATION IS TO PROVIDE STABLE, SAFE, TRAVERSABLE SLOPES WITHIN THE BASIN. AS DEFINED IN MASSDEP STORMWATER MANAGEMENT REGULATIONS, 3:1 SLOPES ARE STANDARD FOR STORMWATER BASINS AND IS CONSIDERED SAFE AND TRAVERSABLE.

Prepared by: CHRIS VANDENBERGHE Date: FEBRUARY 2025

Subdivision: BELL FARM ESTATES

Signed:

Rev. 8/2021

TOWN OF DIGHTON

PLANNING BOARD
979 SOMERSET AVENUE
DIGHTON, MA 02715

PETITIONER: Bell Farm Estates LLC
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LOCATION (from Assessors' Office)
PLAT AND MAP 17
LOT NOS. 109, 135 , and 208

PRESENT ZONING Residential and Agriculture	First Record Date Planning Board Use Only
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FORM R
SUBDIVISION WAIVER REQUEST

Nature of Waiver: TO WAIVE REQUIRMENT THAT ALL DRAIN PIPES SHALL HAVE A MINIMUM OF THREE (3') FEET COVER.

Subdivision Rules and Regulation Reference: 4340

Reason the waiver is requested: TO REDUCE THE AMOUNT OF FILL REQUIRED FOR THE PROJECT, 2 FEET MIN OF COVER IS PROPOSED OVER THE STORM DRAIN PIPES. THE STORM DRAIN PIPES ARE PROPOSED TO BE RCP, WHICH, PER MANUFACTURERS SPECIFICATIONS CAN BE INSTALLED WITH 2 FEET OF COVER.

Alternatives to granting the waiver: INCREASE THE AMOUNT OF FILL REQUIRED FOR THE PROJECT AND PROVIDE 3 FEET OF COVER OVER THE STORM DRAIN PIPES.

Impact of waiver denial on the project: INCREASED AMOUNTS OF FILL AND ASSOCIATED COST REQUIRED FOR THE PROJECT TO PROVIDE 3 FEET OF COVER OVER THE STORM DRAIN PIPES.

Reasons this waiver is in the best interests of the town and consistent with the intent and purpose of the Subdivision Control Law: THE INTENT OF THIS REGULATION IS TO PROVIDE PROPER COVER OVER PIPES TO MEET AN H-20 LOADING RATE. PER MANUFACTURERS SPECIFICATIONS, THE PROPOSED REINFORCED CONCRETE PIPE MEETS H-20 LOADING REQUIREMENTS WITH ONLY 2 FEET OF COVER.

Prepared by: CHRIS VANDENBERGHE Date: FEBRUARY 2025

Subdivision: BELL FARM ESTATES

Signed:

TOWN OF DIGHTON

PLANNING BOARD
979 SOMERSET AVENUE
DIGHTON, MA 02715

PETITIONER: Bell Farm Estates LLC
NAME: Carl Rebello
ADDRESS: 843 Main Street Dighton MA 02715

LOCATION (from Assessors' Office)
PLAT AND MAP 17
LOT NOS. 109, 135 , and 208

PRESENT ZONING Residential and Agriculture	First Record Date Planning Board Use Only
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FORM R
SUBDIVISION WAIVER REQUEST

Nature of Waiver: TO WAIVE REQUIREMENT OF CATCH BASINS TO BE NOT MORE THAN 250 FEET ON CONTINUOUS GRADES OF THE ROADWAY.

Subdivision Rules and Regulation Reference: 4350

Reason the waiver is requested: UP TO 800 FEET IS PROPOSED DUE TO THE PROPOSED BOX CULVERT REQUIRED FOR THE INTERMITTENT STREAM CROSSING. PROVIDING A PIPE THROUGH THE BOX CULVERT STRUCTURE IS NOT POSSIBLE.

Alternatives to granting the waiver: ELIMINATION OF THE BOX CULVERT WHICH WOULD NEGATIVELY IMPACT THE WETLANDS AND THE INTERMITTENT STREAM AT THE CROSSING.

Impact of waiver denial on the project: CATCH BASINS WOULD BE REQUIRED A MAXIMUM OF 250 FEET APART ON CONTINUOUS GRADES, THUS ELIMINATING THE BOX CULVERT WHICH WOULD NEGATIVELY IMPACT THE WETLANDS AND THE INTERMITTENT STREAM AT THE CROSSING.

Reasons this waiver is in the best interests of the town and consistent with the intent and purpose of the Subdivision Control Law: THE INTENT OF THIS REGULATION IS TO ENSURE THE STORMWATER RUNOFF IS CAPTURED AT REGULAR INTERVALS ALONG THE GUTTER LINE TO ENSURE THAT THE CATCH BASINS ADEQUATELY CAPTURE THE RUNOFF DIRECTED TOWARD THEM. CATCH BASIN INLET CAPACITY CALCULATIONS HAVE BEEN PROVIDED TO DEPICT THAT THE CATCH BASINS CAN ADEQUATELY CAPTURE THE RUNOFF DIRECTED TOWARD THEM.

Prepared by: CHRIS VANDENBERGHE Date: FEBRUARY 2025

Subdivision: BELL FARM ESTATES

Signed: Chris Vandenberghe

Rev. 8/2021

TOWN OF DIGHTON

PLANNING BOARD
979 SOMERSET AVENUE
DIGHTON, MA 02715

PETITIONER: Bell Farm Estates LLC
NAME: Carl Rebello
ADDRESS: 843 Main Street Dighton MA 02715

LOCATION (from Assessors' Office)
PLAT AND MAP 17
LOT NOS. 109, 135 , and 208

PRESENT ZONING Residential and Agriculture	First Record Date Planning Board Use Only
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FORM R
SUBDIVISION WAIVER REQUEST

Nature of Waiver: TO WAIVE REQUIREMENT THAT TWO MAJOR REAR CORNERS OF EACH LOT SHALL BE MARKED WITH IRON RODS.

Subdivision Rules and Regulation Reference: 4564

Reason the waiver is requested: THE REAR CORNERS OF THE LOTS WILL BE LOCATED IN THE WOODS, IN LAND THAT IS NOT TO BE DISTURBED. ITWILL BE THE RESPONSIBILITY OF THE FUTURE HOMEOWNERS IF THEY WANT THE REAR CORNERS OF THEIR LOTS TO BE MARKED.

Alternatives to granting the waiver: IRON RODS WILL NEED TO BE PLACED AT THE TWO MAJOR REAR CORNERS OF ALL THE PROPOSED LOTS.

Impact of waiver denial on the project: IRON RODS WILL NEED TO BE PLACED AT THE TWO MAJOR REAR CORNERS OF ALL THE PROPOSED LOTS.

Reasons this waiver is in the best interests of the town and consistent with the intent and purpose of the Subdivision Control Law: THE INTENT OF THIS REGULATION IS TO DELINEATE THE REAR CORNERS OF EACH PROPOSED SUBDIVISON LOT. ALL THE REAR LOTS WITH THE SUBDIVISON ARE TO REMAIN WOODED AND AS SUCH THE REAR CORNERS OF THE LOTS WOULD NOT NEED TO BE MARKED OUT.

Prepared by: CHRIS VANDENBERGHE Date: FEBRUARY 2025

Subdivision: BELL FARM ESTATES

Signed:

Rev. 8/2021

STORMWATER REPORT

STORMWATER REPORT

"BELL FARM ESTATES"
0 MILK STREET
0 COUNCIL OAK WAY

ASSESSORS MAP 17 LOTS 208, 109, 135
DIGHTON, MASSACHUSETTS 02715

Applicant:

BELL FARM ESTATES LLC
843 MAIN STREET
DIGHTON, MA 02715

Prepared By:

CIVIL & ENVIRONMENTAL CONSULTANTS, INC.
31 BELLOWS ROAD
RAYNHAM, MASSACHUSETTS 02767

CEC Project 315-430

FEBRUARY 2025

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APPENDICES

Appendix A – DEP Stormwater Checklist
Appendix B – Geotechnical Information
- NRCS Custom Soil Resource Report

Appendix C – Supporting Calculations
- HydroCAD Drainage Analysis
- TSS Calculations
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Appendix D – Supporting Information
- Illicit Discharge Statement

1.0 PROJECT NARRATIVE

1.1 INTRODUCTION

On behalf of Bell Farm Estates, LLC the ("Applicant"), Civil & Environmental Consultants, Inc. (CEC) has prepared this stormwater report and analysis to demonstrate compliance with the Massachusetts Department of Environmental Protection (MassDEP) Stormwater Management Standards and the Town of Dighton Stormwater By-Law Rules and Regulations.

The Applicant is proposing a 26 lot subdivision to create a total of 26 single family homes on existing parcels shown on Map 17, as Lots 208 109, & 135 within the Town of Dighton. The Subdivision to be known as Bell Farm Estates, will consist of public roads, municipal water, drainage facilities and associated infrastructure to be owned and maintained by the Town. Each lot will be serviced with an individual septic system, so there is no municipal sewer proposed. The project will result in approximately 3,500 linear feet of roadway and associated infrastructure. The properties are zoned Residence & Agriculture.

1.2 EXISTING CONDITIONS

The Site fronts along Milk Street and Council Oak Way in Dighton, Massachusetts. The land cover of the site is mostly wooded vegetation with areas of gravel paths throughout the site. The Site consists of various series of Bordering Vegetated Wetlands (BVW), two (2) vernal pools, isolated and freshwater wetlands, and a pond that flows to an intermittent stream that discharges into a BVW onsite. The various series of resource areas we flagged by Avizinis Environmental Services Inc in June 2023 and June 2024 and approved by the Dighton Conservation Commission via decision on 9/19/24 (SE# 017-0489). The site is primarily bordered by residential properties to the west and south, and town owned dense wooded vegetation to the north and east. See Figure 1 for a Site Locus Map and Figure 2 for an Aerial Map.

Existing topography within the Site ranges from approximately 54 feet (NAVD88) along the western property line boundary down to elevation 36 feet within the central portion of the site. Refer to the Existing Conditions Plan included in the Site Plans under separate cover for additional detail.

The majority of the stormwater runoff from the Site flows overland to the series of onsite Bordering Vegetated Wetlands (BVW), isolated and freshwater wetlands, and the pond within the central area of the site that flows into the intermittent stream that discharges the BVW onsite.

1.2.1 Geotechnical Conditions

According to the Natural Resources Conservation Service (NRCS) Web Soil Survey, the Site is comprised mostly of Hinckley Loamy Sand (#245C), Merrimac Fine Sandy Loam (#254A and #254B), Windsor Loamy Sand (#255A) and Pits-Udorthents complex, gravely (#617).

Based on the review of the NRCS Web Soil Report and information obtained from the preliminary subsurface soil investigation, the site consists of mostly Hydrologic Soils Group (HSG) A soils with a minor portion along the northern property line denoting A/D soils. For the purpose of the stormwater analysis, Hydrologic Soils Group (HSG) "A" was assigned where NRCS Web Soil Survey notes A/D soils. Test Pits conducted in the area of the proposed infiltration basins revealed loamy sand material with sandy loam below at a depth of approximately 4.5 feet below the surface within the proposed location of infiltration basin #1 and sand from 5 feet below the surface within the proposed location of infiltration basin #2. An infiltration rate of 2.41 inches/hour was used associated with the Rawl's rate for "Loamy Sand" for both infiltration basins.

1.2.2 Flood Zone

The subject property is not located within a special flood hazard zone as delineated on Federal Emergency Agency (FEMA) Flood Insurance Rate Map (FIRM) for the Town of Dighton, Panel No. 234 of 550, Map# 25005C0234G effective July 16, 2014, and refer to Figure 3 for the FEMA Flood Insurance Rate Map (FIRM) Firmette for detailed project information.

1.3 PROPOSED PROJECT

The applicant is proposing to develop the subject parcels as a conventional 26 lot residential subdivision for 26 single family homes. The overall development will include the construction of approximately 3,500 linear feet of roadway, curbing, stormwater infiltration facilities, sidewalks, landscaping, and utility infrastructure improvements including municipal water. Each lot will be serviced by individual septic systems, so there is no municipal sewer proposed. The onsite individual septic systems will be designed and proposed on a lot by lot basis, and are not a part of this subdivision.

In the proposed condition, approximately 11% of the development will be covered by impervious areas consisting primarily of roadway pavement, driveways and sidewalk areas and building roof areas for the proposed houses. The remainder of the Site will consist of landscaped/lawn areas and undisturbed vegetation. The overall drainage patterns on the Site will be generally maintained in the proposed condition, conveying flows to the various series of BVW and isolated and freshwater wetlands throughout the site. The majority of proposed stormwater runoff from impervious areas including most of the roadway, paved driveways, and residential buildings will be collected via a

network of deep sump catch basins and routed through drainage pipes and drain manholes prior to discharge to the proposed infiltration basins with sediment forebays.

The Site's Stormwater infiltration basins will result in decreases in peak runoff rates for the 2, 10, and 25-year storm. Peak runoff rates do increase in the 100-year storm event to some design points. (Refer to Section 3.3). The stormwater infiltration basins are designed to provide storage of the 1" Water Quality Volume and provide a minimum of 80% total suspended solid (TSS) removal with a 44% TSS pre-treatment removal rate prior to discharge to each of the stormwater infiltration basins. In accordance with Standard 6 of the Massachusetts Department of Environmental Protection (MassDEP) Stormwater Management Standards since the entirety of the site falls within a Zone II Interim Wellhead Protection Area. Treatment of the 1" water quality volume is required.

See HydroCAD Drainage Analysis in Appendix C.

2.0 STORMWATER MANAGEMENT SYSTEMS

2.1 DESCRIPTION OF RUNOFF CONTROLS

The stormwater management improvements consist of components designed to manage runoff from the Site. These components attenuate runoff discharge peaks, minimize erosion, minimize the transport of sediments, improve water quality, and minimize impacts to downstream resource areas.

The stormwater management system implements a treatment train of the Best Management Practices designed to provide minimum of 80% TSS (Total Suspended Solids) removal for stormwater runoff from the proposed pavement, roof and parking area. The proposed stormwater management system will use the following specific control measures:

- Infiltration Basins: Infiltration basins are highly effective treatment systems that remove many contaminants, including TSS. However, infiltration basins are not intended to remove coarse particulate pollutants. Pretreatment devices are used to remove them before they enter the basin. The pollutant removal efficiency of the basin depends on how much runoff is exfiltrated by the basin.

  In compliance with the Massachusetts Department of Environmental Protection (MassDEP) Stormwater Management Standards the stormwater infiltration basins have been designed with appropriately sized sediment forebays to achieve the required 44% pre-treatment removal requirement. See Appendix C for Sediment Forebay sizing calculation.

- Riprap Outlet Protection: Riprap outlet protection will be placed at all stormwater outfalls in order to reduce flows to non-erosive velocities to prevent erosion and conform to natural topography where appropriate.

All of these proposed runoff controls are detailed on the Site Plans included under separate cover.

2.2 CONSTRUCTION SEQUENCE PLAN

The purpose of the Construction Sequence Plan is to develop a working schedule for the implementation of the proposed stormwater improvements. Prior to initiating work, the siltation control barriers will be installed along the limit of work. Once the appropriate permits are obtained, the construction project will commence in the following sequence:

1. Obtain approvals and other applicable permits.
2. Flag limits or work silt fence and mark trees for protection
3. Hold pre-construction meeting at least one week prior to start of construction.
4. Install siltation fence erosion control barrier at locations indicated on the plans and construct stabilized site construction entrances.

5. Conduct a site walk with the Town of Dighton Conservation Commission and the engineer to approve the location and installation of the erosion control devices.
6. Clear and grub site at all areas associated with the construction.
7. Construct sediment traps and set up other construction measures as shown on the plans.
8. Construct the stormwater infiltration basins as soon as practicable after the proposed locations have been cleared.
9. Install proposed utilities and stormwater infrastructure.
10. Rough grade the roadway and sidewalks. Excavate crushed stone and subsoil from cut and fill areas and stockpile. Consideration should be given to locate the stockpiles on the uphill side of the site, where possible, to act as temporary diversions.
11. After the site is stabilized, remove all temporary measures and install permanent vegetation on disturbed areas. Adequate growth for stabilization is defined as vegetation covering 75% or more of the ground surface.

All construction water will be collected and treated in accordance with the Erosion and Sediment Control Plan included in Section 5.0.

3.0 STORMWATER ANALYSIS

3.1 METHOD OF ANALYSIS

A hydrologic analysis has been performed for the Site comparing existing conditions and post-development conditions using a software program developed by HydroCAD Software Solutions LLC. This program analyzes site hydrology by the graphic peak discharge method documented in Technical Release No. 20 and Technical Release No. 55 published by the United States Department of Agriculture (USDA) Soil Conservation Service.

The following variables were developed for contributing watersheds (drainage areas) in order to complete the analysis:

- **Rainfall Depth:** A hydrologic analysis was performed for the 24-hour 2-year, 10-year, 25-year and 100-year, Type III storm events (3.40, 4.80, 5.60 and 7.00 inches respectively) for each drainage area. The rainfall depths for the study area were obtained from available charts published in Technical Paper No. 40 for Bristol County.

- **Runoff Curve Number (RCN):** The RCN is a hydrologic characteristic that contributes to the peak rate of runoff and volume from a given storm event. It is dependent upon soil conditions and land use. Generally, higher curve numbers are associated with less pervious soils and, hence, greater amounts of runoff. As previously noted, based NRCS Web Soil Survey Report, Hydrologic Soil Group (HSG) A was used in determining RCNs.

- **Time of Concentration:** The time of concentration is defined as the time it takes runoff to travel from the hydraulically most distant part of the watershed to the downstream point of interest. This parameter is dependent on the characteristics of the ground surface and condition of the travel path. Times of concentration were calculated for the various sub catchments using the HydroCAD program, with a minimum time of concentration of six (6) minutes used in accordance with the protocol outlined in Technical Release No. 55.

3.2 DRAINAGE AREAS

In order to perform the analysis, the contributing drainage areas for pre-development, existing, and post-development conditions were delineated. The delineation of the drainage areas was determined by the topography depicted on the Existing Conditions plan. Brief descriptions of the existing conditions and proposed conditions drainage areas are as follows:

- **Existing Conditions:** The Site is divided into eight (8) existing conditions drainage areas and the stormwater runoff was evaluated for eight (8) design points, Flow to D-Series (DP-A), Flow to Northern property line of Map 17 Lot 207 (DP-B), Flow to Depression (DP-1B), Flow to F-Series from intermittent stream (DP-C), Flow to VP at Northern Corner/G-Series (DP-D),

Flow to Central VP/C-Series (DP-E), Flow off site to eastern property line (DP-F), and Flow to A-Series (DP-G). Refer to Figure HYD-PRE for the existing conditions drainage areas. For the purpose of the analysis, the times of concentration were calculated to the edge of the wetlands where present. A summary of existing conditions drainage areas is listed below:

TABLE 3.1
EXISTING CONDITIONS

Drainage Area	Design Point	Area (ac.)	Curve Number	Time of Concentration (minutes)
A1-EX	DP-A	1.46	34	20.7
B1-EX	DP-B	0.94	30	10.9
1B1-EX	DP-1B	2.0	32	22.5
C1-EX	DP-C	14.80	34	21.8
D1-EX	DP-D	6.48	30	29.1
E1-EX	DP-E	16.61	40	23.3
F1-EX	DP-F	2.03	30	13.3
G1-EX	DP-G	3.05	54	9.0

- **Proposed Conditions:** The Site is divided into eleven (11) proposed conditions drainage areas and the stormwater runoff will continue to flow to seven (7) design points, Flow to D-Series (DP-A), Flow to Northern property line of Map 17 Lot 207 (DP-B), Flow to F-Series from intermittent stream (DP-C), Flow to VP at Northern Corner/G-Series (DP-D), Flow to Central VP/C-Series (DP-E), Flow off site to eastern property line (DP-F), and Flow to A-Series (DP-G). Refer to Figure HYD-POST for the proposed conditions drainage area. Note that existing conditions DP-1B is no longer utilized as this area of the site has been graded to eliminate the depression. A summary of the proposed conditions drainage areas are listed below:

TABLE 3.2
POST-DEVELOPMENT CONDITIONS

Drainage Area	Design Point	Area (ac.)	Curve Number	Time of Concentration (minutes)
A1-PR	DP-A	1.05	30	15.4
B1-PR	DP-B	1.20	34	11.6
C1-PR	DP-C	14.08	36	21.8
D1-PR	DP-D	6.21	61	13.6
D2-PR		3.13	32	14.3
E1-PR	DP-E	7.70	60	9.9
E2-PR		5.93	36	19.0
E3-PR		3.55	44	14.9
F1-PR	DP-F	1.28	36	13.3
G1-PR	DP-G	2.90	53	9.0
G2-PR		0.35	65	6.0

3.3 RESULTS OF ANALYSIS

A stormwater analysis was performed for the 24-hour 2-year, 10-year, 25-year, and 100-year storm events in order to determine stormwater runoff rates once the proposed construction is complete. Detailed calculations are attached in Appendix C. A summary of the peak stormwater runoff is provided below in Table 3.3.

TABLE 3.3 PROJECT STORMWATER RUNOFF RATES								
	Peak Runoff Rate (cfs)							
Design Point	2-Year		10-Year		25-Year		100-Year	
	Ex.	Prop.	Ex.	Prop.	Ex.	Prop.	Ex.	Prop.
DP-A	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
DP-B	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
DP-1B	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0
DP-C	0.0	0.0	0.1	0.1	0.3	0.3	1.7	2.1
DP-D	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2
DP-E	0.0	0.0	0.5	0.4	1.9	1.0	6.3	7.4
DP-F	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.3
DP-G	0.4	0.2	1.9	1.6	3.3	3.1	5.9	6.1

cfs = cubic feet per second

As shown above in Table 3.3, post-development runoff rates from the Site do not exceed existing runoff rates for the 2-, 10-, and 25-year storm events. See Supporting calculations provided in Appendix C.

The 100-year event does exceed the pre-development peak runoff rate to Design Points B, C, E, F and G. However, the additional stormwater runoff rates are not anticipated to cause any downstream/ off site flooding from these additional peak runoff rates. A brief description and calculations of how downstream/ off site flooding is not anticipated is summarized below:

- **To Design Point B**: The overall volume increase in the 100-year storm event increases from 0.013 af in the existing conditions to 0.035 af in the post condition. This 0.022 af (960 ft^3) of additional stormwater flows to an approx. 40,000 sq. ft wooded area off site which equates to an overall increase of 0.024' or ≈0.29" in the 100-year storm event. Therefore, this minor increase off site is negligible and will not exacerbate flooding on the neighboring properties.
- **To Design Point C**: The overall volume increase in the 100-year storm event increases from 0.432 af in the existing conditions to 0.476 af in the post condition. This 0.044 af (1920 ft^3) of additional stormwater flows to an approx. 70,000 sq. ft wetland system (shown as design point C) on site which equates to an overall increase of 0.03' or ≈0.33" in the 100-year storm event. Therefore, this minor increase to this wetland system is negligible and will not exacerbate flooding on site or to the neighboring properties.

- **To Design Point E**: The overall volume increase in the 100-year storm event increases from 0.997 af in the existing conditions to 1.07 af in the post condition. This 0.073 af (3,200 ft^3) of additional stormwater flows to an approx. 26,500 sq. ft wetland system (shown as design point C) on site which equates to an overall increase of 0.12' or ≈1.4" in the 100-year storm event. Therefore, this minor increase to this wetland system is negligible and will not exacerbate flooding on site or to the adjacent properties.
- **To Design Point F**: The overall volume increase in the 100-year storm event increases from 0.027 af in the existing conditions to 0.05 af in the post condition. This 0.023 af (1000 ft^3) of additional stormwater flows to an approx. 80,000 sq. ft wooded area off site which equates to an overall increase of 0.013' or ≈0.15" in the 100-year storm event. Therefore, this minor increase off site is negligible and will not exacerbate flooding on the neighboring properties.
- **To Design Point G**: In the 100-year storm event the overall volume decreases from 0.468 af in existing conditions to 0.454 af in the post condition. Because there is a decrease in volume to design point G (Flow to A-Series) from existing conditions, no flooding on site or to the adjacent properties will occur.

4.0 STORMWATER CONTROL SYSTEM DESIGN CRITERIA

4.1 MASSDEP STORMWATER MANAGEMENT POLICY

Stormwater discharge from the proposed Project is subject to the Massachusetts DEP Stormwater Management Policy (the Policy). The Policy is designed *"to protect the wetlands and waters of the Commonwealth from adverse impacts of storm water runoff."* To accomplish this goal, the Policy establishes ten (10) performance standards to control stormwater quantity and quality. These standards establish the level of required controls that can be achieved with site planning, structural and non-structural controls, and other best management practices (BMPs). The Stormwater Checklist is provided in Appendix A. Stormwater modeling methodology is discussed in detail in Section 3.0. Results of the stormwater modeling of the existing and proposed conditions are provided as Appendix C.

4.2 STORMWATER MANAGEMENT STANDARDS

The following section documents compliance with the MassDEP Stormwater Management Standards.

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.

The project is designed to limit to the extent possible new stormwater conveyances that discharge untreated stormwater into, or cause erosion to, wetlands or waters of the Commonwealth. The proposed project captures and provides treatment for all new impervious paved areas and will be conveyed through a new series of stormwater BMPs that will discharge clean runoff to the existing series of on-site wetland resource areas.

Stormwater runoff from the site will be conveyed through deep sump hooded catch basins, drain manholes and associated piping that discharge into sediment forebays and, ultimately, the infiltration basins. Each outfall will have riprap installed at the outlet to prevent scour. There will be no new stormwater conveyances that will discharge untreated runoff directly to or that can cause erosion in wetlands or waters of the Commonwealth.

Standard 2
Stormwater management systems must 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.

The post-development peak discharge rate to design points A, B, C, D, E, F, and G do not exceed pre-development rates for the 2, 10 and 25-year storm events. Stormwater modeling methodology is discussed in detail in Section 3.0. The HydroCAD model output is provided as Appendix C. A summary of the HydroCAD model results are provided above in Table 3.3, and in the subsequent description.

Standard 3

Loss of annual recharge to groundwater should be minimized through the use of infiltration measures to the maximum extent practicable. The annual recharge from the post-development site should approximate the annual recharge from the pre-development or existing site conditions, based on soil types.

The project is designed to comply with this criteria. The project will result in the addition of approximately 3.6 acres of new impervious areas. In accordance with the stormwater standards, 0.60-inches of recharge must be provided for the increase in impervious areas on the Site for HSG's A. Accordingly, a total of 8,286 cubic feet (cf) of groundwater recharge is required based on the increase of impervious areas. Through the introduction of the various stormwater infiltration practices, a total of 53,702 cf of recharge is proposed, providing significantly more recharge than the regulatory requirement.

A Saturated Hydraulic Conductivity rate of 2.41 in/hour was utilized for the recharge facilities to document compliance for drawdown of the stormwater in less than 72 hours. Supporting calculations are provided in Appendix C.

Standard 4

For new development, stormwater management systems must be designed to remove 80% of the average annual load (post-development conditions) of Total Suspended Solids (TSS). It is presumed that this standard is met when:

A. *Suitable nonstructural practices for source control and pollution prevention are implemented;*
B. *Stormwater management best practices (BMPs) are sized to capture the prescribed runoff volume; and*
C. *Stormwater management BMPs are maintained as designed.*

The proposed development utilizes several methods of stormwater management to reduce TSS generation including deep sump hooded catch basins, properly sized sediment forebays and an infiltration basin prior to discharging, consistent with the Policy.

The project has been designed to remove more than 80% of the average annual load of TSS. All stormwater BMPs have been sized to capture the prescribed water quality volume and are designed according to the specific performance criteria outlined in the Massachusetts Stormwater Management Manual.

See Water Quality Calculations, Sediment Forebay Calculations and TSS Calculations provided in Appendix C for supporting information.

A comprehensive Operations and Maintenance Plan (O&M) has been developed and is included in Section 6.0 of this report.

Standard 5
Stormwater discharges from areas with higher potential pollutant loads require the use of specific stormwater management BMPs. The use of infiltration practices without pre-treatment is prohibited.

The Site is not considered to in an area with higher potential pollutant loads.

Standard 6
Stormwater discharges to critical areas must utilize certain stormwater management BMPs approved for critical areas. Critical areas are Outstanding Resources Waters (ORWs), shellfish beds, bathing beaches, cold water fisheries, and recharge areas for public water supplies.

The project is within a Zone II Wellhead Protection Area. The project has been designed according to the specific performance criteria outlined in the Massachusetts Stormwater Management Manual for stormwater discharges within Zone II Protection Areas, by providing a water quality storage volume for the 1" rain event, rather than the 0.5" rain event. Refer to the Water Quality Volume calculations provided in Appendix C for supporting information.

Standard 7
Redevelopment of previously developed sites must meet the Stormwater Management Standards to the maximum extent practicable. Where it is not practicable to meet all the Standards, new (retrofitted or expanded) stormwater management systems must be designed to improve existing conditions.

The Project is not redevelopment project.

Standard 8
Erosion and sediment controls must be implemented to prevent impacts during construction, or land disturbance activities.

Erosion and sediment controls are integral to the project improvements. The plan includes compost silt socks, which will be installed down-gradient of the proposed work area. A temporary stabilized construction exit will be constructed as well. Prior to, and during construction, the Site's Erosion and Sediment Control Plan, included in Section 5.0 of this report will be followed. These measures will be utilized throughout construction to prevent erosion, control sediments, and stabilize exposed soils as discussed in Section 5.0.

Standard 9

All stormwater management systems must have an operations and maintenance plan to ensure that systems function as designed.

A comprehensive Operations and Maintenance Plan (O&M) has been developed and is included in Section 6.0 of this report.

Standard 10

All illicit discharges to the stormwater management system are prohibited.

There are no known illicit discharges at the Site. If found, any illicit discharges will be eliminated, and the project will not be constructed with any illicit connections. A draft Illicit Discharge Statement is provided in Appendix D.

5.0 CONSTRUCTION SEDIMENTATION AND EROSION CONTROL PLAN

5.1 INTRODUCTION

The greatest potential for sediment generation will occur during the construction. An extensive erosion and sedimentation program is proposed and will be diligently implemented during construction of the project. The erosion control program will minimize erosion and sedimentation that could potentially impact resources areas. Water quality will be maintained by minimizing erosion of exposed soils and siltation. Erosion control barriers will be installed and exposed soil areas re-vegetated as soon as possible after work in an area is completed.

This Erosion and Sedimentation Control Plan includes preliminary measures and requirements for management and implementation of erosion and sediment controls during construction. A detailed Stormwater Pollution Prevention Plan (SWPPP) will be prepared and a Notice of Intent (NOI) will be filed with the United States Environmental Protection Agency (USEPA) in accordance with USEPA's National Pollutant Discharge Elimination System (NPDES) General Permit program for stormwater discharges from construction sites prior to the commencement of any construction activity. The SWPPP will contain elements from this Erosion and Sediment Control Plan and will include additional and more detailed inspection and maintenance procedures as well as maintenance logs, forms, and additional erosion and sediment control measures.

Responsible Party for Plan Compliance:

Bell Farm Estates LLC
843 Main Street
Dighton MA 02715

Contact: Carl Rebello
Email: carl@rebelloconstruction.com

5.2 CONSTRUCTION AND WASTE MATERIALS EXPECTED ON-SITE

5.2.1 Construction Materials & Waste

Building products staged on site are to be protected by measures to minimize the exposure to stormwater or precipitation. Provided measures either can be a cover or similarly effective means to minimize the discharge of pollutants from these areas. Examples of effective means include locating activities away from resource areas and stormwater inlets or conveyances and directing wash waters to a sediment basin or sediment trap, using filtration devices, such as filter bags or sand filters, or using other similarly effective controls.

The contractor will utilize and secure dumpsters / roll offs as deemed appropriate for sorting, temporary storage and disposal of waste. Waste disposal will be completed by the Contractor or by a waste disposal firm. Containers will be removed and replaced if appropriate when they are adequately filled or at the end of a specific construction task as deemed necessary by the construction supervisor.

The Contractor shall keep waste container lids closed when not in use and close lids at the end of the business day for those containers that are actively used throughout the day. For waste containers that do not have lids, provide either (1) cover (e.g., a tarp, plastic sheeting, temporary roof) to minimize exposure of wastes to precipitation, or (2) a similarly effective means designed to minimize the discharge of pollutants(e.g., secondary containment).

On business days, clean up and dispose of waste in designated waste containers. Clean up immediately if containers overflow.

5.2.2 Hazardous Waste

No Hazardous or toxic waste is anticipated to be present on site. If utilized or found to be present, the Plan will be modified. If applicable, any hazardous or toxic waste will be properly stored, managed and removed from the site pursuant to appropriate regulations, manufactures recommendations and Material Safety Data Sheets (MSDS).

5.2.3 Sanitary Waste

Portable sanitary facilities will be utilized at the site and pumped out at a time-frame sufficient to keep odor and material from disturbing personnel at the site or every 4 weeks.

For sanitary waste, position portable toilets so that they are secure and will not be tipped or knocked over and located away from waters of the U.S. and stormwater inlets or conveyances. Units will be inspected at least once per month and emptied regularly and as needed.

5.2.4 Concrete Waste

All concrete washings will be disposed on in a designated area away from wetlands and any property line. When the concrete hardens it be removed from the site.

5.3 CONSTRUCTION PHASE EROSION CONTROL MEASURES

The adjacent resource areas will be protected during construction by implementing siltation control measures, including the placement of compost silt socks as close as feasible to the downgradient limit of construction activity. The project may also implement other stabilization methods such as erosion netting and hydroseeding.

5.3.1 Short- and Long-Term Goals and Criteria

Short and long-term goals will include a variety of stabilizing sediment and erosion controls around the limit of work. All construction-phase erosion and sediment controls have been designed to retain sediment on-site to the extent practicable and limit runoff and the discharge of pollutants (sediment) from exposed areas of the Site.

All control measures will be installed and maintained in accordance with the manufacturer's specifications and good engineering practices. Weekly inspections and routine monitoring will be used to determine the effectiveness of controls in use.

Litter and solid construction debris potentially exposed to the stormwater will be prevented from becoming a pollution source through routine monitoring and the use of laborers to "pick" litter, as necessary.

5.3.2 Stabilization Practices

The construction site activities will include numerous stabilizing practices. Sediment and erosion controls such as erosion netting, mulching, and hydro-seeding may act as interim practices. Erosion netting material may include single net straw blankets or coconut blankets. Permanent stabilization practices will include the use of a hydro-seeding over vegetative support soil where additional exposure threatens stormwater quality. Seeding will be carried out with a seed mixture equal to the "Roadside Slope Mix" included below. All siltation barriers will remain in place until all exposed areas are re-vegetated.

PLANTING SCHEDULE FOR EXPOSED AREAS

1. All exposed areas will receive 6 inches of topsoil or compost material with the infiltration basin to receive 4 inches of loamy sand seeded at a rate of 2 pounds of red top, 15 pounds of creeping red fescue and 20 pounds tall fescue per acre
2. Seed will be equal to "Roadside Slope Mix" as specified by the Mass. Highway Department. Please refer to chart below for specifications. This mixture will be spread at a rate of 5 pounds per 1,000 square feet

TABLE 5.1 ROADSIDE SLOPE MIX			
Common Name	**Germination Proportion**	**Purity Minimum**	**Minimum**
Creeping Red Fescue	50%	85%	95%
Kentucky 3	30%	85%	95%
Domestic Rye	10%	90%	98%
Red Top	5%	85%	92%
Ladino Clover	5%	85%	96%

5.3.3 Structural Practices

Perimeter controls will consist of compost silt socks. In order to ensure effective performance, proper installation is required. 2" x 2" wooden stakes will be positioned on the downhill side (away from the job Site) of the silt socks. The posts will be driven at least one foot into the ground.

Two temporary stabilized construction exits will be constructed, one at the Mik Street entrance and the entrance off of Council Oak Way. A cross slope will be placed at the entrances to direct runoff to the settling area. If deemed necessary after construction begins, a wash pad may be included to wash off vehicle wheels before leaving the Site.

5.4 NON-STRUCTURAL CONTROLS

5.4.1 Good Housekeeping

Non-structural controls are as effective as structural controls in sediment control. Non-structural controls to be used at the construction Site include:

- Regular sweeping of paved surfaces; and
- Prompt cleanup of any waste or spilled waste materials.

5.4.2 Exposure Minimization

Exposure will be minimized by providing both permanent and temporary soil stabilization (see Section 5.2.2) over areas that have been completely constructed, or areas that will not be revisited within a 30-day period.

Where practicable, industrial materials and activities will be protected from exposure to rain, snow, snowmelt, or runoff.

5.4.3 Preventative Maintenance

A preventative maintenance program includes the timely inspection and maintenance of stormwater management devices. Examples of preventative maintenance include:

- Removal of obstructions, if any, from inlets and outlets.
- Removal of accumulated sediment and vacuuming water from sumps.
- Repairing and re-planting slope areas that experience erosion.

5.4.4 Inspections

An experienced Construction Monitor will conduct inspections of construction areas once every 7 calendar days and within 24 hours of the occurrence of a storm event of 0.25 inches or greater, or the occurrence of runoff from snowmelt sufficient to cause a discharge. Storm event information from a weather station representative of the Site's location may be used to determine if a storm event of 0.25 inches or greater has occurred on the Site. Total rainfall will be measured for any day of rainfall during normal business hours that measures 0.25 inches or greater. Construction areas an experienced Construction Monitor will inspect include:

- Disturbed areas of the construction Site that have not been finally stabilized,
- Areas used for storage of materials that are exposed to precipitation,
- Structural control measures,
- Locations where vehicles enter or exit the Site, and
- The stormwater management system and discharge outlets.

Disturbed areas and areas used for storage of materials that are exposed to precipitation will be inspected for evidence of, or the potential for, pollutants entering the drainage system.

Sediment and erosion control measures identified will be observed to ensure that they are operating correctly. The discharge locations or points will be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to receiving waters. Locations where vehicles enter or exit the Site will be inspected for evidence of offsite sediment tracking.

Based on the results of these routine inspections, the Contractor will correct any deficiencies found as soon as practicable. Results of the inspections, corrective actions taken in response to any deficiencies, and any opportunities for improvement that are identified will be documented in an inspection report.

All concrete washings will be disposed on in a designated area away from wetlands and any property line. When the concrete hardens it be removed from the site.

5.5 POLLUTION AND SPILL PREVENTION

5.5.1 Materials

The following materials are anticipated to be present onsite during construction:

- General construction materials
- Asphalt/concrete
- Paint
- Petroleum-based products
- Cleaning solvents

5.5.2 Material Management Practices

Good Housekeeping Practices

- Store only enough materials needed for current construction activities.
- All materials that are stored outside will be stored in a neat, orderly manner, in the original containers.
- Materials will be kept in their original containers with manufacturer's labels.
- Whenever possible, all materials should be used before disposing the container.
- The site contractor shall be responsible for daily inspections to ensure proper handling and disposal of materials on site.

Product Specific Practices

Petroleum/Fertilizer Products:

- Refueling vehicles shall be DOT certified and shall contain SPCC Plans in place along with emergency equipment to contain and clean up spills.
- All on site construction vehicles shall be inspected for leaks and receive regular preventive maintenance to reduce the chance of leakage.
- Petroleum-based products will be stored in tightly sealed containers, which are properly marked.
- All fertilizers will be stored in a dry protected area and only used according to manufacturer’s recommendation.

Paints:

- All containers will be tightly sealed and stored when not required for use.
- All procedures will be followed to minimize spills and to keep products in the original containers.

Concrete Trucks:

- The site contractor is responsible for designating a safe area, away from abutting property and resource areas, for excess concrete disposal.

Product Specific Practices

In addition to the good housekeeping and material management practices discussed in the previous sections of this plan, the following practices will be followed for spill prevention and cleanup during construction:

- Manufacturer recommended methods for spill cleanup will be clearly posted and site personnel will be made aware of the procedures and the location of the information and cleanup supplies.
- All spills will be cleaned up immediately after discovery.
- In any case or threat of explosion or life threatening condition, all personnel shall evacuate the area to safety and then contact the local fire department for assistance.
- The spill area will be ventilated and personnel will wear appropriate protective clothing to prevent injury from contact with a hazardous substance.
- The site contractor shall be responsible for spill prevention and cleanup and will designate at least three personnel who will receive spill prevention and cleanup training. The names of the assigned three personnel will be posted in the material storage area in the field office on site.

5.6 RECORDKEEPING

The following records will be maintained on the Site:

1. Dates when major grading activities occur,
2. Dates when construction activities temporarily or permanently cease on a portion of the Site,
3. Dates when stabilization measures are initiated, and
4. In addition, the following records will also be kept:
    - The Order of Conditions; and any additional permit conditions/approvals,
    - All inspection reports, and
    - Any spill reports.

6.0 OPERATIONS AND MAINTENANCE (O&M) PLAN

6.1 GENERAL

Stormwater management systems with multiple components, such as the one proposed for the project, assures the cleanest possible discharges of stormwater to the environment. However, these systems must be routinely maintained to keep them in good working order. Additionally, this plan identifies potential sources of pollution that may affect the quality of stormwater discharges and describes the implementation of Long-Term Pollution Prevention practices to reduce potential pollutants in stormwater discharge. The party identified below will be responsible for the operation and maintenance of the stormwater management system and Site. Schedules and procedures for inspection and maintenance of the existing and proposed stormwater management system components are provided in the following sections.

Responsible Party for Plan Compliance:

Bell Farm Estates LLC
843 Main Street
Dighton MA 02715

Contact: Carl Rebello
Email: carl@rebelloconstruction.com

Upon transfer of ownership, the future homeowner(s) or the Town of Dighton shall assume the responsibilities for compliance with this O&M Plan.

Emergency Contact Information:
Civil & Environmental Consultants, Inc.
(774) 501-2176

6.2 ROUTINE INSPECTIONS

Inspections of the stormwater management system as a whole, and of the individual components of the system, will be carried out on a routine basis in accordance with the schedule identified in Section 6.3. Components to be inspected include the catch basins, and infiltration basins/sediment forebays. Each will be inspected for sediment buildup, presence of oil, color, and structural damage. The results of each inspection will be entered into an inspection log. Refer to Table 6.1 for the inspection log forms.

6.3 MAINTENANCE PLAN

The Responsible Party will incorporate a routine maintenance program to assure proper operation of the stormwater management system. The program will include the following maintenance activities:

Deep Sump and Hooded Catch Basins

- All catch basins including the lawn catch basin on subdivision Lot 8 shall be inspected a minimum of at least four times per year.
- Sediment, if more than two (2) feet deep, and/or floatable pollutants shall be pumped from the basin and disposed of at an approved offsite facility in accordance with all applicable regulations.
- Any structural damage or other indication of malfunction will be reported to the site manager and repaired as necessary.
- During cleanings, confirm the oil/debris trap (hood) is installed properly, is free of clogs, and is functional. Reinstall or replace as needed.
- During colder periods, the catch basin grates must be kept free of snow and ice.
- During warmer periods, the catch basin grates must be kept free of leaves, litter, sand, and debris.

Infiltration Basins/Sediment Forebays

- Inspect at least twice a year, after a 2-year storm event. After every significant storm event, inspect the high outlet orifice on the outlet control structure.
- During the first year, inspect the basin after each storm event greater than 1 inch and confirm that the basin is draining within 72 hours after the storm event.
- Mow grass as needed, but at least twice per year. Remove trash and clippings at least twice per year and re-seed any eroded or barren areas.
- Remove accumulated sediment with light equipment, as necessary, when the floor of the basin is dry.
- Inspect pre-treatment devices at least twice per year. Inspect outlet control structures for signs of deterioration, confirm orifices are unblocked and free of debris.

Rip-Rap Outlet/ Cross Culvert at Sta 23+50

- Inspect after the first several rainfall events and after any major storm events within the first year. After the first year, inspect regularly on an annual basis.
- Remove any sediment, trash, debris, leaves and grass clippings. Remove any tree seedlings before they become firmly established.
- Note and repair any erosion or low spots.

Stone Trench

- Inspect and clean twice per year.
- Inspect for washouts and repair if necessary.
- Remove vegetation and debris.

Low Flow Level Spreader

- Inspect after the first several rainfall events and after any major storm events within the first year. After the first year, inspect regularly on an annual basis.
- Remove any sediment, trash, debris, leaves and grass clippings. Remove any tree seedlings before they become firmly established.
- Note and repair any erosion or low spots in the level spreader.

Stormwater Outfall

- Inspect once per year, typically in the spring.
- Inspect for washouts and repair if necessary.
- Remove vegetation and debris from blocking the outfall.

6.4 LONG TERM POLLUTION PREVENTION MAINTENANCE

The Responsible Party will incorporate a routine maintenance program to ensure the continued effectiveness of the structural water quality controls. Maintenance will be performed based on the results of inspections in accordance with the schedules identified below. The program will include the following maintenance activities:

Maintenance of Pavement Systems

Regular maintenance of pavement surfaces will prevent pollutants such as oil and grease, trash, and sediments from entering the stormwater management system. The following practices should be performed:

- Sweep or vacuum asphalt pavement areas annually with a commercial cleaning unit and dispose of removed material.
- Routinely pick up and remove litter from the parking areas, islands, and perimeter landscaping.

Maintenance of Vegetated Areas

Proper maintenance of vegetated areas can prevent the pollution of stormwater runoff by controlling the source of pollutants such as suspended sediments, excess nutrients, and chemicals

from landscape care products. Practices that should be followed under the regular maintenance of the vegetated landscape include:

- Inspect planted areas on a semi-annual basis and remove any litter.
- Maintain planted areas adjacent to pavement to prevent soil washout.
- Immediately clean any soil deposited on pavement.
- Re-seed bare areas: install appropriate erosion control measures when native soil is exposed, or erosion channels are forming.
- Plant alternative mixture of grass species in the event of unsuccessful establishment.
- Grass vegetation should not be cut to a height less than four inches.
- Pesticide/Herbicide Usage – No pesticides are to be used unless a single spot treatment is required for a specific control application.
- Fertilizer usage should be avoided. If deemed necessary, slow-release fertilizer should be used. Fertilizer may be used to begin the establishment of vegetation in bare or damaged areas but should not be applied on a regular basis unless necessary.

Management of Snow and Ice

Should significant snow fall events occur, which result in stockpiled snow impacting the operation of the Project Site, through the temporary loss of parking or limiting access in any way, the property manager may choose to have snow removed from the site. All snow removal operations will be done in accordance with Massachusetts DEP guidelines BRPG01-01, effective date March 8, 2001.

Salt and Deicing Chemicals

The amount of sand to be used on the site shall be reduced to the minimum amount needed to provide safe pedestrian and vehicle travel. The following practices should be followed to control the amount of sand that comes into contact with stormwater runoff:

- Devices used for spreading salt should be capable of varying the rate of application based on the site-specific conditions.
- Sand should be stockpiled under covered storage facilities that prevent precipitation and adjacent runoff from coming in contact with the deicing materials.
- The use of any salts or deicing chemicals is strictly prohibited.

6.5 EMPLOYEE TRAINING

Training of personnel is essential to achieving proper operation and maintenance of the stormwater management system. Therefore, those Facility personnel who are responsible for operation and maintenance will be trained on the following subjects:

- Environmental laws and regulations relating to stormwater,
- The components and goals of the current Erosion and Sediment Control Plan,

- Site specific permit conditions and requirements,
- General Facility spill response procedures,
- General good housekeeping procedures, and
- General material management procedures.

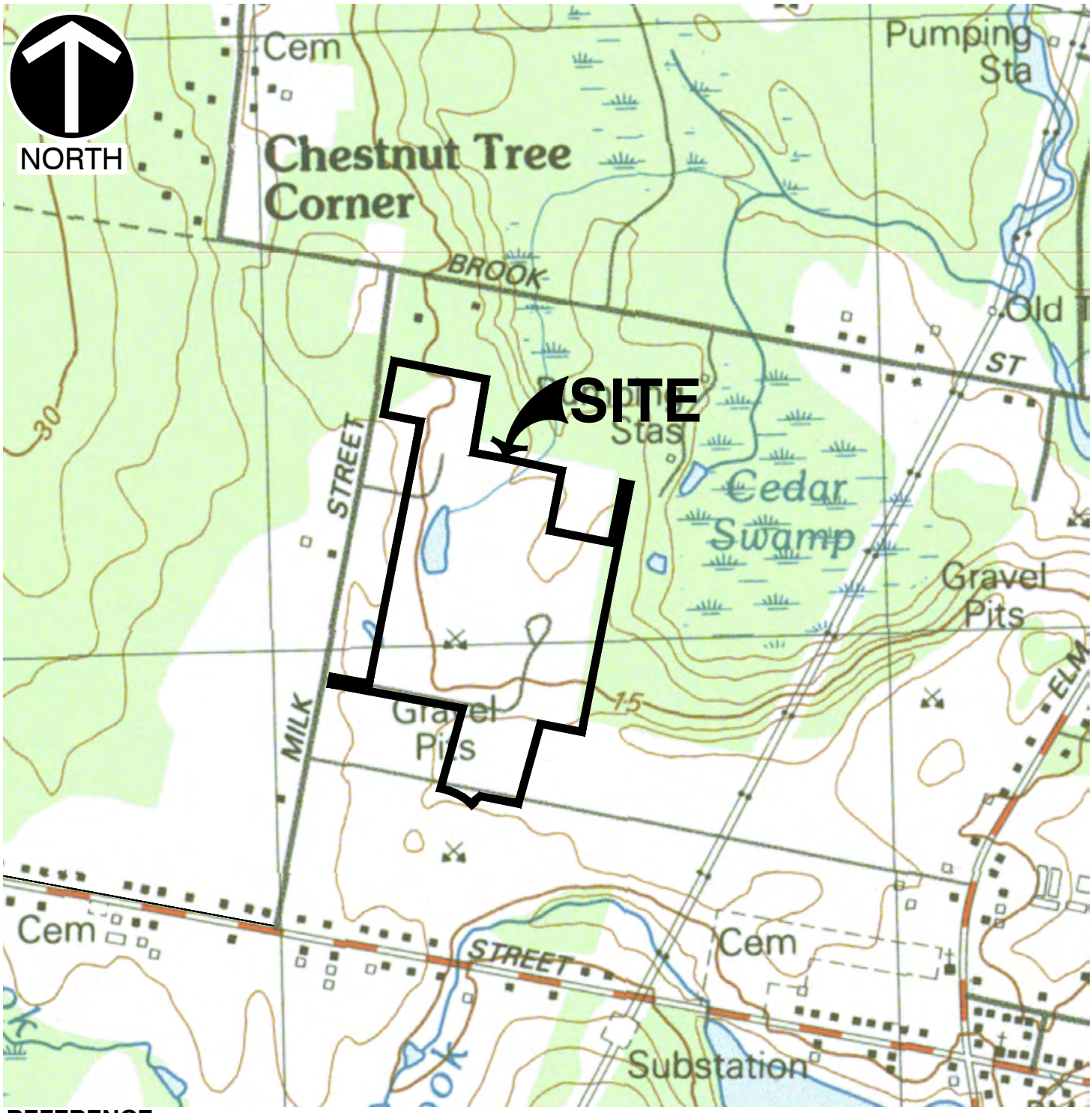
Refresher training sessions will be held once a year following the completion of the Site Compliance Evaluation.

6.6 RECORDKEEPING

Records of inspections and maintenance shall be up to date and available for review and inspection, if requested by the towns official.

FIGURES

Figure 1 – Site Locus
Figure 2 – Aerial Exhibit
Figure 3 – FEMA Firmette
Figure 4 – Critical Areas Map
Figure HYD-PRE – Existing Conditions Drainage Area Map
Figure HYD-POST – Proposed Conditions Drainage Area Map



REFERENCE

1. U.S.G.S. 7.5' TOPOGRAPHIC MAP, q229838, q229842, q233838, q233842, q237838, AND q237842 QUADRANGLE, MASSACHUSETTS DATED: 2001; ACCESSED NOVEMBER 2024.

SCALE IN FEET

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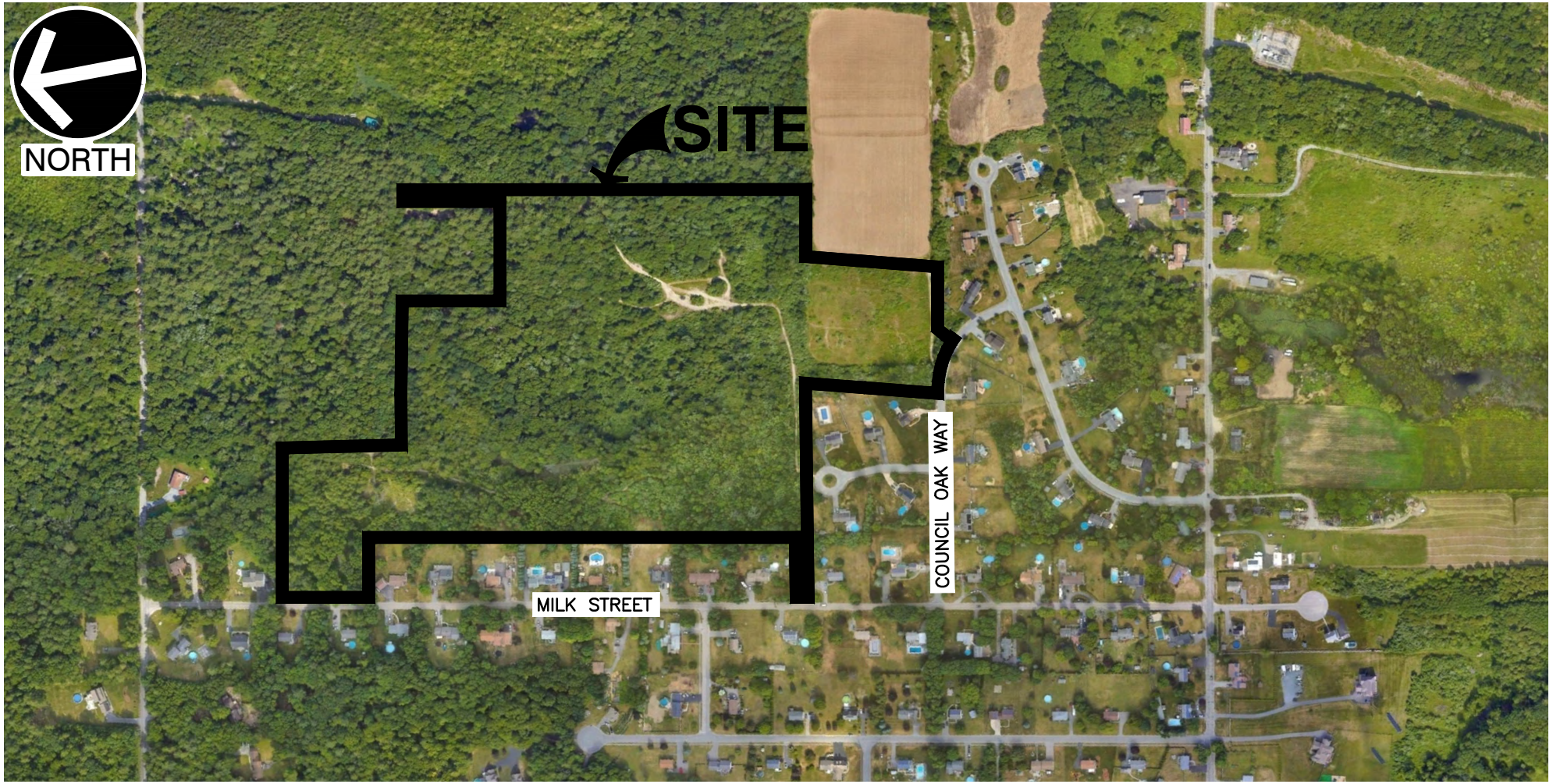
BELL FARM ESTATES
ASSESSOR'S MAP 17
LOTS 135, 109, 208
MILK STREET, DIGHTON, MA

SITE LOCUS

DRAWN BY:	AMB	CHECKED BY:	DRAFT	APPROVED BY:	DRAFT	FIGURE NO.:
DATE:	JANUARY 2024	DWG SCALE:	1"=1,000'	PROJECT NO:	315-430	1

P:\310-000\315-430\-CADD\Dwg\SP01\315430-SP01-Site Locus.dwg{FIGURE 1} LS:(12/16/2024 - abucco) - LP: 12/16/2024 9:42 AM



REFERENCE

1. ORTHOGRAPHIC AERIAL IMAGERY AND MAPS ARE BASED ON GIS DATA OBTAINED FROM MASSGIS PROVIDED BY THE BUREAU OF GEOGRAPHIC INFORMATION (MASSGIS), COMMONWEALTH OF MASSACHUSETTS, EXECUTIVE OFFICE OF TECHNOLOGY AND SECURITY SERVICES.

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BELL FARM ESTATES
ASSESSOR'S MAP 17
LOTS 135, 109, 208
MILK STREET, DIGHTON, MA

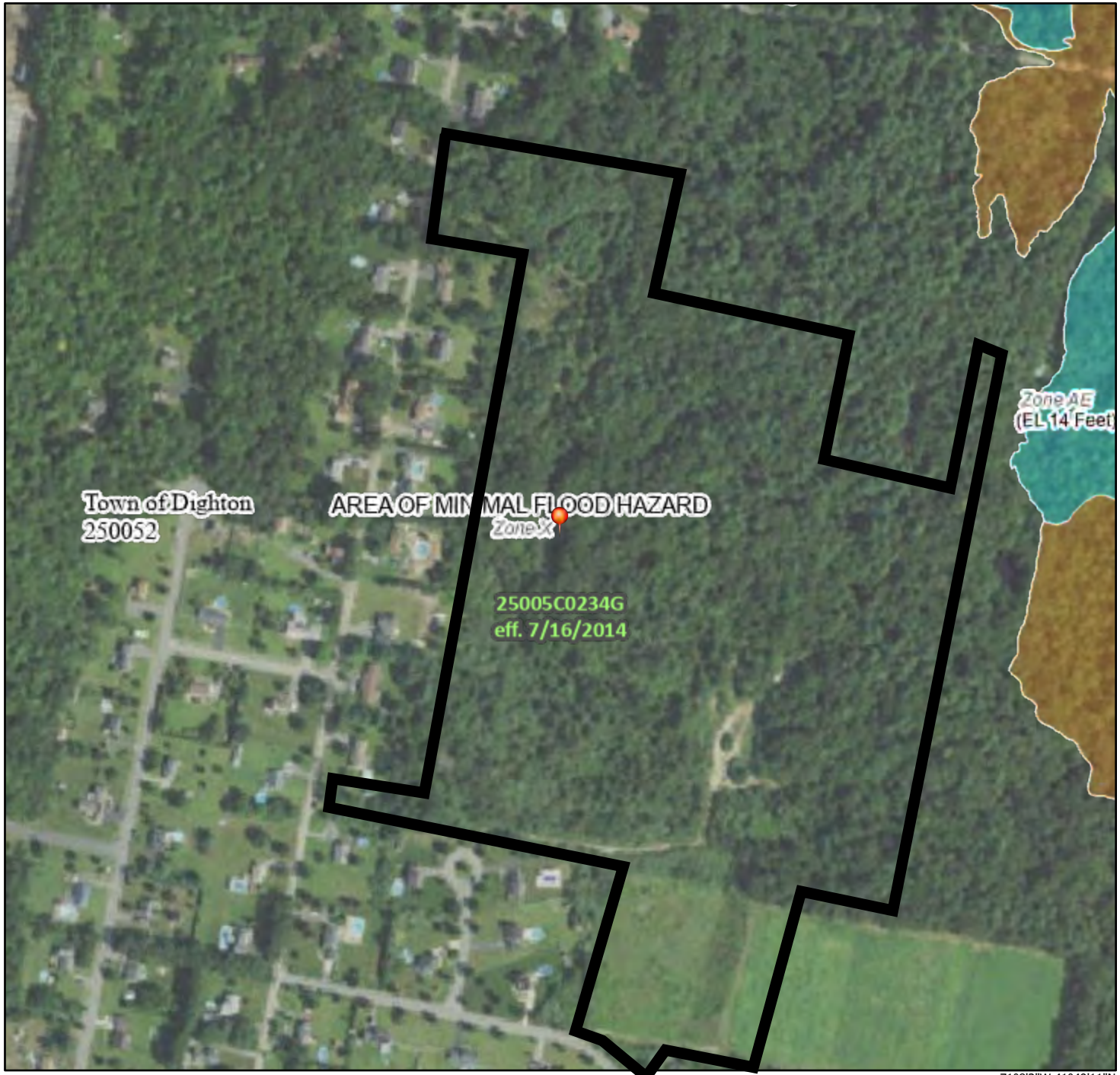
AERIAL MAP

DRAWN BY:	AMB	CHECKED BY:	DRAFT	APPROVED BY:	DRAFT	FIGURE NO.:	2
DATE:	JANUARY 2024	DWG SCALE:	1"=500'	PROJECT NO:	315-430		

National Flood Hazard Layer FIRMette

FEMA

71°8'40"W 41°49'37"N



0 250 500 1,000 1,500 2,000 Feet

1:6,000

71°8'3"W 41°49'11"N

Basemap Imagery Source: USGS National Map 2023

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

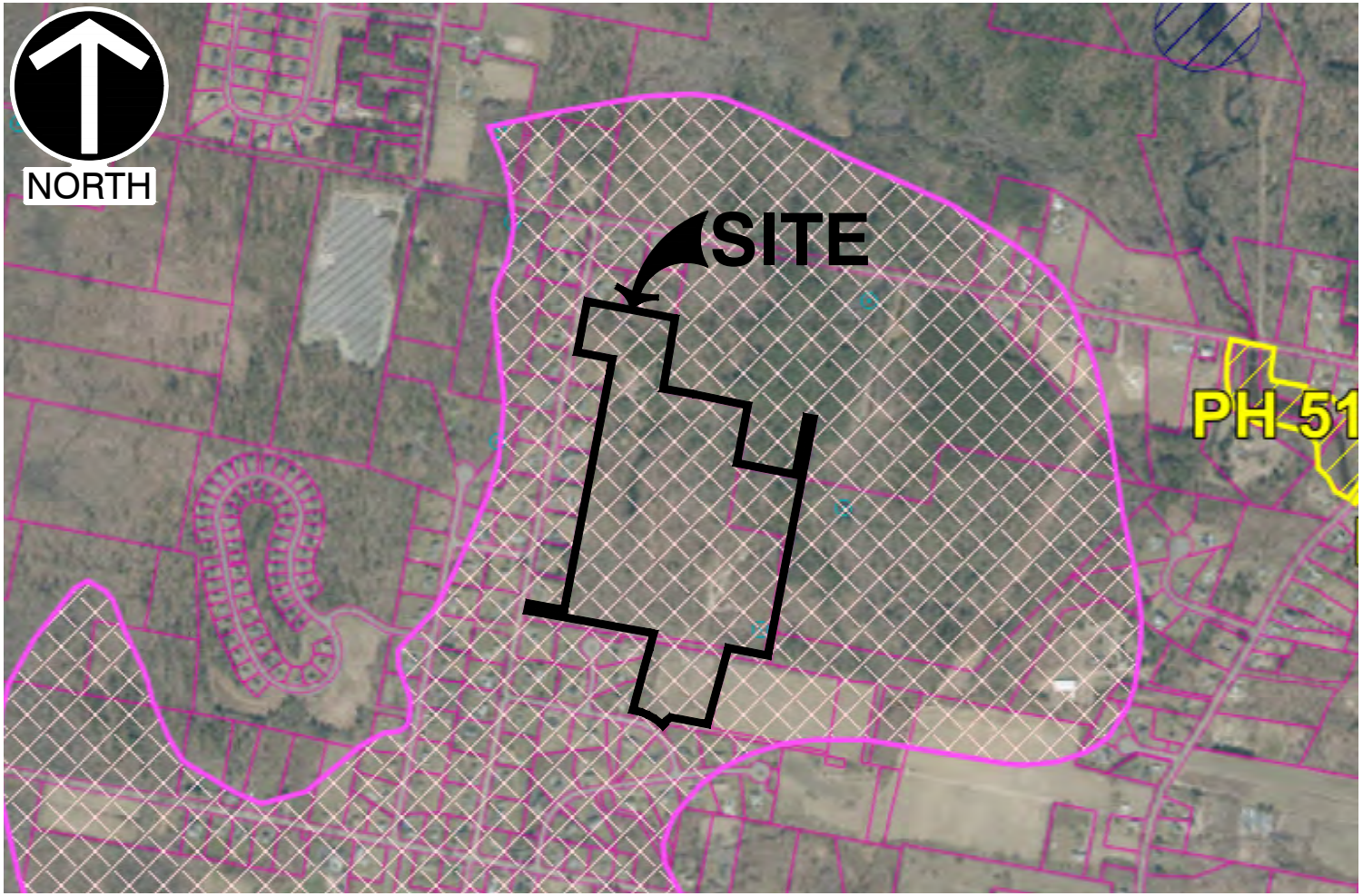
N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 11/25/2024 at 3:37 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.



LEGEND

- AREAS OF CRITCAL ENVIRONMENTAL CONCERN ACECs
- NHESP CERTIFIED VERNAL POOLS
- NHESP ESTIMATED HABITATS OF RARE WILDLIFE
- NHESP PRIORITY HABITATS OF RARE SPECIES
- ZONE A
- ZONE B
- ZONE IIs
- POTENTIAL VERNAL POOLS

REFERENCE

1. MAPS ARE BASED ON GIS DATA OBTAINED FROM MASSGIS PROVIDED BY THE BUREAU OF GEOGRAPHIC INFORMATION (MASSGIS), COMMONWEALTH OF MASSACHUSETTS, EXECUTIVE OFFICE OF TECHNOLOGY AND SECURITY SERVICES.

SCALE IN FEET

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BELL FARM ESTATES
ASSESSOR'S MAP 17
LOTS 135, 109, 208
MILK STREET, DIGHTON, MA

CRITICAL AREAS MAP

DRAWN BY:	AMB	CHECKED BY:	DRAFT	APPROVED BY:	DRAFT	FIGURE NO.:	4
DATE:	JANUARY 2024	DWG SCALE:	1"=1,000'	PROJECT NO:	315-430		

NORTH

LEGEND

- A — DESIGN POINT
- A1 — SUBCATCHMENT AREA
- P1 — POND/DETENTION AREA
- SUBCATCHMENT BOUNDARY
- TIME OF CONCENTRATION PATH
- VEGETATED AREA
- WOODED AREA
- PAVED AREA
- GRAVEL AREA
- ROOF AREA
- WATER AREA

DP-A, DP-B, DP-C, DP-D, DP-E, DP-F, DP-G, DP-1B

A1-EX, B1-EX, C1-EX, D1-EX, E1-EX, F1-EX, G1-EX

FRESHWATER WETLAND

VERNAL POOL PER TOWN OF DIGHTON CONSERVATION BY-LAW

BORDERING VEGETATED WETLAND

INTERMITTENT STREAM

POND

25' NO TOUCH

MASSASOIT ROAD

MILK (PUBLIC-60' WIDE) STREET

OAK WAY (PUBLIC-40' WIDE) COUNCIL

S 79°09'28" E 40.00'

N 11°27'36" E 327.07'

S 10°56'13" W 1349.62'

N 79°04'06" W 39.91'

N 79°08'03" W 187.10'

S 15°10'36" W 415.99'

N 79°22'17" W 20.15'

S 18°42'25" W 327.18'

S 78°24'55" E 166.86'

S 9°15'23" W 386.44'

N 79°13'17" E 499.25'

N 10°46'43" E 1410.90'

N 10°46'43" E 1426.90'

N 15°10'33" E 442.98'

N 79°22'17" W 9.15'

S 79°56'37" E 200.43'

N 10°46'43" E 289.01'

N 10°46'43" E 40.00'

MAP 17 LOT 135 N/F TOWN OF SOMERSET

MAP 17 LOT 109A N/F TOWN OF DIGHTON

MAP 17 LOT 136 N/F TOWN OF DIGHTON

MAP 17 LOT 209-15 N/F MICHAEL J. & KRISETN L. GRADY

MAP 17 LOT 209-14 N/F JOHN R. & TRICIA L. COUTURE

MAP 17 LOT 209-13 N/F RAYMOND J. & SANDRA J. ROSARIO

MAP 17 LOT 209-3 N/F TIMOTHY & SUSAN TOOLIN

MAP 17 LOT 209-4 N/F MICHAEL J. & MICHELLE L. AGRESTI

MAP 17 LOT 209-5 N/F ROBERT C. & CARLA A. CEURVELS

MAP 17 LOT 209-4.1 N/F COUNCIL OAK ESTATES TRUST

MAP 17 LOT 202 N/F PAUL R. & JODITH A. JOLY

MAP 17 LOT 203 N/F JAMES GARCIA

MAP 17 LOT 306 N/F GWEN R. REYNOLDS

MAP 17 LOT 305 N/F DAVID B. & MELISSA A. ROGERS

MAP 17 LOT 312 N/F JENNIFER L. GABRAL

MAP 17 LOT 313 N/F RAYMOND L. & JUDITH M. LACHANCE & SARAH K. DUSSEAULT

MAP 17 LOT 316 N/F JAMES R. & KAREN S. WILKINSON

MAP 17 LOT 311 N/F CURRAN V. BUCO & JESSICA FONTAINE

MAP 17 LOT 310 N/F COLLEEN M. LEWIS

MAP 17 LOT 314 N/F MICHAEL J. GIUVA

MAP 17 LOT 323 N/F SHANE T. & CELESTE M. WHITEHOUSE

MAP 17 LOT 209-4 N/F NICHOLAS & ALAINA ST. GERMAIN

SCALE IN FEET
0 80 160

DRAFT

SUBMITTAL RECORD

NO	DATE	DESCRIPTION

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BELL FARM ESTATES
ASSESSOR'S MAP 17
LOTS 135, 109, 208
MILK STREET, DIGHTON, MA

EXISTING CONDITIONS DRAINAGE AREA MAP

DATE:	JANUARY 2025
DWG SCALE:	1"=80'
PROJECT NO:	315-430
DRAWN BY:	AMB
CHECKED BY:	DRAFT
APPROVED BY:	DRAFT

EXHIBIT:
HYD-PRE

SHEET 1 OF 2

P:\310-000\315-430\-CADD\Dwg\CIVIL\315430-CIVIL-HYD-Pre.dwg[LAYOUT1] LS:2/14/2025 - [Updated] - LP: 2/14/2025 2:09 PM

NORTH

LEGEND

- DESIGN POINT (A)
- SUBCATCHMENT AREA (A1)
- POND/DETENTION AREA (P1)
- SUBCATCHMENT BOUNDARY
- TIME OF CONCENTRATION PATH
- VEGETATED AREA
- WOODED AREA
- PAVED AREA
- GRAVEL AREA
- ROOF AREA
- WATER AREA

DP-A
DP-B
DP-C
DP-D
DP-E
DP-F
DP-G
A1-PR
B1-PR
C1-PR
D1-PR
D2-PR
E1-PR
E2-PR
E3-PR
F1-PR
G1-PR
G2-PR
P1
P2
P3
FRESHWATER WETLAND
VERNAL POOL
BORDERING VEGETATED WETLAND
POND
MASSASOIT ROAD
COUNCIL OAK WAY (PUBLIC-40' WIDE)
MILK (PUBLIC-50' WIDE) STREET

SCALE IN FEET
0 80 160

SUBMITTAL RECORD

NO	DATE	DESCRIPTION

CEC
Civil & Environmental Consultants, Inc.
31 Bellows Road
Raynham, MA 02767
Ph: 774.501.2176
www.cecinc.com

BELL FARM ESTATES
ASSESSOR'S MAP 17
LOTS 135, 109, 208
MILK STREET, DIGHTON, MA

PROPOSED CONDITIONS
DRAINAGE AREA MAP

DATE:	JANUARY 2025	DRAWN BY:	AMB
DWG SCALE:	1"=80'	CHECKED BY:	DRAFT
PROJECT NO:			315-430
APPROVED BY:			DRAFT

EXHIBIT:
HYD-POST
SHEET 2 OF 2

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APPENDIX A

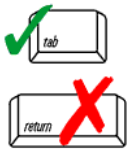
DEP STORMWATER CHECKLIST

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands Program

Checklist for Stormwater Report

A. Introduction

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



A Stormwater Report must be submitted with the Notice of Intent permit application to document compliance with the Stormwater Management Standards. The following checklist is NOT a substitute for the Stormwater Report (which should provide more substantive and detailed information) but is offered here as a tool to help the applicant organize their Stormwater Management documentation for their Report and for the reviewer to assess this information in a consistent format. As noted in the Checklist, the Stormwater Report must contain the engineering computations and supporting information set forth in Volume 3 of the Massachusetts Stormwater Handbook. The Stormwater Report must be prepared and certified by a Registered Professional Engineer (RPE) licensed in the Commonwealth.

The Stormwater Report must include:

- The Stormwater Checklist completed and stamped by a Registered Professional Engineer (see page 2) that certifies that the Stormwater Report contains all required submittals.[1] This Checklist is to be used as the cover for the completed Stormwater Report.
- Applicant/Project Name
- Project Address
- Name of Firm and Registered Professional Engineer that prepared the Report
- Long-Term Pollution Prevention Plan required by Standards 4-6
- Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan required by Standard 8[2]
- Operation and Maintenance Plan required by Standard 9

In addition to all plans and supporting information, the Stormwater Report must include a brief narrative describing stormwater management practices, including environmentally sensitive site design and LID techniques, along with a diagram depicting runoff through the proposed BMP treatment train. Plans are required to show existing and proposed conditions, identify all wetland resource areas, NRCS soil types, critical areas, Land Uses with Higher Potential Pollutant Loads (LUHPPL), and any areas on the site where infiltration rate is greater than 2.4 inches per hour. The Plans shall identify the drainage areas for both existing and proposed conditions at a scale that enables verification of supporting calculations.

As noted in the Checklist, the Stormwater Management Report shall document compliance with each of the Stormwater Management Standards as provided in the Massachusetts Stormwater Handbook. The soils evaluation and calculations shall be done using the methodologies set forth in Volume 3 of the Massachusetts Stormwater Handbook.

To ensure that the Stormwater Report is complete, applicants are required to fill in the Stormwater Report Checklist by checking the box to indicate that the specified information has been included in the Stormwater Report. If any of the information specified in the checklist has not been submitted, the applicant must provide an explanation. The completed Stormwater Report Checklist and Certification must be submitted with the Stormwater Report.

---

[1] The Stormwater Report may also include the Illicit Discharge Compliance Statement required by Standard 10. If not included in the Stormwater Report, the Illicit Discharge Compliance Statement must be submitted prior to the discharge of stormwater runoff to the post-construction best management practices.

[2] For some complex projects, it may not be possible to include the Construction Period Erosion and Sedimentation Control Plan in the Stormwater Report. In that event, the issuing authority has the discretion to issue an Order of Conditions that approves the project and includes a condition requiring the proponent to submit the Construction Period Erosion and Sedimentation Control Plan before commencing any land disturbance activity on the site.

Massachusetts Department of Environmental Protection
Bureau of Resource Protection - Wetlands Program

Checklist for Stormwater Report

B. Stormwater Checklist and Certification

The following checklist is intended to serve as a guide for applicants as to the elements that ordinarily need to be addressed in a complete Stormwater Report. The checklist is also intended to provide conservation commissions and other reviewing authorities with a summary of the components necessary for a comprehensive Stormwater Report that addresses the ten Stormwater Standards.

Note: Because stormwater requirements vary from project to project, it is possible that a complete Stormwater Report may not include information on some of the subjects specified in the Checklist. If it is determined that a specific item does not apply to the project under review, please note that the item is not applicable (N.A.) and provide the reasons for that determination.

A complete checklist must include the Certification set forth below signed by the Registered Professional Engineer who prepared the Stormwater Report.

Registered Professional Engineer's Certification

I have reviewed the Stormwater Report, including the soil evaluation, computations, Long-term Pollution Prevention Plan, the Construction Period Erosion and Sedimentation Control Plan (if included), the Long-term Post-Construction Operation and Maintenance Plan, the Illicit Discharge Compliance Statement (if included) and the plans showing the stormwater management system, and have determined that they have been prepared in accordance with the requirements of the Stormwater Management Standards as further elaborated by the Massachusetts Stormwater Handbook. I have also determined that the information presented in the Stormwater Checklist is accurate and that the information presented in the Stormwater Report accurately reflects conditions at the site as of the date of this permit application.

Registered Professional Engineer Block and Signature

2/17/2025

Signature and Date

Checklist

Project Type: Is the application for new development, redevelopment, or a mix of new and redevelopment?

☒ New development

☐ Redevelopment

☐ Mix of New Development and Redevelopment

Checklist for Stormwater Report

Checklist (continued)

LID Measures: Stormwater Standards require LID measures to be considered. Document what environmentally sensitive design and LID Techniques were considered during the planning and design of the project:

☐ No disturbance to any Wetland Resource Areas

☐ Site Design Practices (e.g. clustered development, reduced frontage setbacks)

☐ Reduced Impervious Area (Redevelopment Only)

☒ Minimizing disturbance to existing trees and shrubs

☐ LID Site Design Credit Requested:

- ☐ Credit 1
- ☐ Credit 2
- ☐ Credit 3

☐ Use of "country drainage" versus curb and gutter conveyance and pipe

☐ Bioretention Cells (includes Rain Gardens)

☐ Constructed Stormwater Wetlands (includes Gravel Wetlands designs)

☐ Treebox Filter

☐ Water Quality Swale

☐ Grass Channel

☐ Green Roof

☒ Other (describe): Infiltration Basins

Standard 1: No New Untreated Discharges

☒ No new untreated discharges

☒ Outlets have been designed so there is no erosion or scour to wetlands and waters of the Commonwealth

☒ Supporting calculations specified in Volume 3 of the Massachusetts Stormwater Handbook included.

Checklist for Stormwater Report

Checklist (continued)

Standard 2: Peak Rate Attenuation

☐ Standard 2 waiver requested because the project is located in land subject to coastal storm flowage and stormwater discharge is to a wetland subject to coastal flooding.

☐ Evaluation provided to determine whether off-site flooding increases during the 100-year 24-hour storm.

☒ Calculations provided to show that post-development peak discharge rates do not exceed pre-development rates for the 2-year and 10-year 24-hour storms. If evaluation shows that off-site flooding increases during the 100-year 24-hour storm, calculations are also provided to show that post-development peak discharge rates do not exceed pre-development rates for the 100-year 24-hour storm.

Standard 3: Recharge

☒ Soil Analysis provided.

☒ Required Recharge Volume calculation provided.

☐ Required Recharge volume reduced through use of the LID site Design Credits.

☒ Sizing the infiltration, BMPs is based on the following method: Check the method used.

☐ Static ☒ Simple Dynamic ☐ Dynamic Field[1]

☐ Runoff from all impervious areas at the site discharging to the infiltration BMP.

☒ Runoff from all impervious areas at the site is *not* discharging to the infiltration BMP and calculations are provided showing that the drainage area contributing runoff to the infiltration BMPs is sufficient to generate the required recharge volume.

☒ Recharge BMPs have been sized to infiltrate the Required Recharge Volume.

☐ Recharge BMPs have been sized to infiltrate the Required Recharge Volume *only* to the maximum extent practicable for the following reason:

- ☐ Site is comprised solely of C and D soils and/or bedrock at the land surface
- ☐ M.G.L. c. 21E sites pursuant to 310 CMR 40.0000
- ☐ Solid Waste Landfill pursuant to 310 CMR 19.000
- ☐ Project is otherwise subject to Stormwater Management Standards only to the maximum extent practicable.

☒ Calculations showing that the infiltration BMPs will drain in 72 hours are provided.

☐ Property includes a M.G.L. c. 21E site or a solid waste landfill and a mounding analysis is included.

[1] 80% TSS removal is required prior to discharge to infiltration BMP if Dynamic Field method is used.

Checklist for Stormwater Report

Checklist (continued)

Standard 3: Recharge (continued)

☐ The infiltration BMP is used to attenuate peak flows during storms greater than or equal to the 10-year 24-hour storm and separation to seasonal high groundwater is less than 4 feet and a mounding analysis is provided.

☒ Documentation is provided showing that infiltration BMPs do not adversely impact nearby wetland resource areas.

Standard 4: Water Quality

The Long-Term Pollution Prevention Plan typically includes the following:

- Good housekeeping practices;
- Provisions for storing materials and waste products inside or under cover;
- Vehicle washing controls;
- Requirements for routine inspections and maintenance of stormwater BMPs;
- Spill prevention and response plans;
- Provisions for maintenance of lawns, gardens, and other landscaped areas;
- Requirements for storage and use of fertilizers, herbicides, and pesticides;
- Pet waste management provisions;
- Provisions for operation and management of septic systems;
- Provisions for solid waste management;
- Snow disposal and plowing plans relative to Wetland Resource Areas;
- Winter Road Salt and/or Sand Use and Storage restrictions;
- Street sweeping schedules;
- Provisions for prevention of illicit discharges to the stormwater management system;
- Documentation that Stormwater BMPs are designed to provide for shutdown and containment in the event of a spill or discharges to or near critical areas or from LUHPPL;
- Training for staff or personnel involved with implementing Long-Term Pollution Prevention Plan;
- List of Emergency contacts for implementing Long-Term Pollution Prevention Plan.

☒ A Long-Term Pollution Prevention Plan is attached to Stormwater Report and is included as an attachment to the Wetlands Notice of Intent.

☒ Treatment BMPs subject to the 44% TSS removal pretreatment requirement and the one inch rule for calculating the water quality volume are included, and discharge:

- ☒ is within the Zone II or Interim Wellhead Protection Area
- ☐ is near or to other critical areas
- ☒ is within soils with a rapid infiltration rate (greater than 2.4 inches per hour)
- ☐ involves runoff from land uses with higher potential pollutant loads.

☐ The Required Water Quality Volume is reduced through use of the LID site Design Credits.

☒ Calculations documenting that the treatment train meets the 80% TSS removal requirement and, if applicable, the 44% TSS removal pretreatment requirement, are provided.

Checklist for Stormwater Report

Checklist (continued)

Standard 4: Water Quality (continued)

☒ The BMP is sized (and calculations provided) based on:

- ☒ The ½" or 1" Water Quality Volume or
- ☒ The equivalent flow rate associated with the Water Quality Volume and documentation is provided showing that the BMP treats the required water quality volume.

☐ The applicant proposes to use proprietary BMPs, and documentation supporting use of proprietary BMP and proposed TSS removal rate is provided. This documentation may be in the form of the propriety BMP checklist found in Volume 2, Chapter 4 of the Massachusetts Stormwater Handbook and submitting copies of the TARP Report, STEP Report, and/or other third party studies verifying performance of the proprietary BMPs.

☐ A TMDL exists that indicates a need to reduce pollutants other than TSS and documentation showing that the BMPs selected are consistent with the TMDL is provided.

Standard 5: Land Uses With Higher Potential Pollutant Loads (LUHPPLs)

☐ The NPDES Multi-Sector General Permit covers the land use and the Stormwater Pollution Prevention Plan (SWPPP) has been included with the Stormwater Report.

☐ The NPDES Multi-Sector General Permit covers the land use and the SWPPP will be submitted ***prior to*** the discharge of stormwater to the post-construction stormwater BMPs.

☐ The NPDES Multi-Sector General Permit does ***not*** cover the land use.

☐ LUHPPLs are located at the site and industry specific source control and pollution prevention measures have been proposed to reduce or eliminate the exposure of LUHPPLs to rain, snow, snow melt and runoff, and been included in the long term Pollution Prevention Plan.

☐ All exposure has been eliminated.

☐ All exposure has ***not*** been eliminated and all BMPs selected are on MassDEP LUHPPL list.

☐ The LUHPPL has the potential to generate runoff with moderate to higher concentrations of oil and grease (e.g. all parking lots with >1000 vehicle trips per day) and the treatment train includes an oil grit separator, a filtering bioretention area, a sand filter or equivalent.

Standard 6: Critical Areas

☐ The discharge is near or to a critical area and the treatment train includes only BMPs that MassDEP has approved for stormwater discharges to or near that particular class of critical area.

☒ Critical areas and BMPs are identified in the Stormwater Report.

Checklist for Stormwater Report

Checklist (continued)

Standard 7: Redevelopments and Other Projects Subject to the Standards only to the maximum extent practicable

☐ The project is subject to the Stormwater Management Standards only to the maximum Extent Practicable as a:

- ☐ Limited Project
- ☐ Small Residential Projects: 5-9 single family houses or 5-9 units in a multi-family development provided there is no discharge that may potentially affect a critical area.
- ☐ Small Residential Projects: 2-4 single family houses or 2-4 units in a multi-family development with a discharge to a critical area
- ☐ Marina and/or boatyard provided the hull painting, service and maintenance areas are protected from exposure to rain, snow, snow melt and runoff
- ☐ Bike Path and/or Foot Path
- ☐ Redevelopment Project
- ☐ Redevelopment portion of mix of new and redevelopment.

☐ Certain standards are not fully met (Standard No. 1, 8, 9, and 10 must always be fully met) and an explanation of why these standards are not met is contained in the Stormwater Report.

☐ The project involves redevelopment and a description of all measures that have been taken to improve existing conditions is provided in the Stormwater Report. The redevelopment checklist found in Volume 2 Chapter 3 of the Massachusetts Stormwater Handbook may be used to document that the proposed stormwater management system (a) complies with Standards 2, 3 and the pretreatment and structural BMP requirements of Standards 4-6 to the maximum extent practicable and (b) improves existing conditions.

Standard 8: Construction Period Pollution Prevention and Erosion and Sedimentation Control

A Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan must include the following information:

- Narrative;
- Construction Period Operation and Maintenance Plan;
- Names of Persons or Entity Responsible for Plan Compliance;
- Construction Period Pollution Prevention Measures;
- Erosion and Sedimentation Control Plan Drawings;
- Detail drawings and specifications for erosion control BMPs, including sizing calculations;
- Vegetation Planning;
- Site Development Plan;
- Construction Sequencing Plan;
- Sequencing of Erosion and Sedimentation Controls;
- Operation and Maintenance of Erosion and Sedimentation Controls;
- Inspection Schedule;
- Maintenance Schedule;
- Inspection and Maintenance Log Form.

☒ A Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan containing the information set forth above has been included in the Stormwater Report.

Checklist for Stormwater Report

Checklist (continued)

Standard 8: Construction Period Pollution Prevention and Erosion and Sedimentation Control (continued)

☐ The project is highly complex and information is included in the Stormwater Report that explains why it is not possible to submit the Construction Period Pollution Prevention and Erosion and Sedimentation Control Plan with the application. A Construction Period Pollution Prevention and Erosion and Sedimentation Control has ***not*** been included in the Stormwater Report but will be submitted ***before*** land disturbance begins.

☐ The project is ***not*** covered by a NPDES Construction General Permit.

☐ The project is covered by a NPDES Construction General Permit and a copy of the SWPPP is in the Stormwater Report.

☒ The project is covered by a NPDES Construction General Permit but no SWPPP been submitted. The SWPPP will be submitted BEFORE land disturbance begins.

Standard 9: Operation and Maintenance Plan

☒ The Post Construction Operation and Maintenance Plan is included in the Stormwater Report and includes the following information:

- ☒ Name of the stormwater management system owners;
- ☒ Party responsible for operation and maintenance;
- ☒ Schedule for implementation of routine and non-routine maintenance tasks;
- ☒ Plan showing the location of all stormwater BMPs maintenance access areas;
- ☒ Description and delineation of public safety features;
- ☐ Estimated operation and maintenance budget; and
- ☒ Operation and Maintenance Log Form.

☐ The responsible party is ***not*** the owner of the parcel where the BMP is located and the Stormwater Report includes the following submissions:

- ☐ A copy of the legal instrument (deed, homeowner's association, utility trust or other legal entity) that establishes the terms of and legal responsibility for the operation and maintenance of the project site stormwater BMPs;
- ☐ A plan and easement deed that allows site access for the legal entity to operate and maintain BMP functions.

Standard 10: Prohibition of Illicit Discharges

☒ The Long-Term Pollution Prevention Plan includes measures to prevent illicit discharges;

☒ An Illicit Discharge Compliance Statement is attached;

☐ NO Illicit Discharge Compliance Statement is attached but will be submitted ***prior to*** the discharge of any stormwater to post-construction BMPs.

APPENDIX B

GEOTECHNICAL INFORMATION

NRCS Soil Resource Report

NRCS Soil Resource Report

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Bristol County, Massachusetts, Northern Part

0 Milk Street & 0 Council Oak Way

December 2, 2024

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

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Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map

Map Scale: 1:4,620 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 50 100 200 300

Feet: 0 200 400 800 1200

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 19N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Bristol County, Massachusetts, Northern Part
Survey Area Data: Version 17, Aug 27, 2024

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 14, 2022—Jul 1, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
43A	Scarboro mucky fine sandy loam, 0 to 3 percent slopes	2.9	3.8%
52A	Freetown muck, 0 to 1 percent slopes	5.5	7.2%
245B	Hinckley loamy sand, 3 to 8 percent slopes	2.5	3.3%
245C	Hinckley loamy sand, 8 to 15 percent slopes	10.1	13.3%
245D	Hinckley loamy sand, 15 to 25 percent slopes	11.8	15.6%
254A	Merrimac fine sandy loam, 0 to 3 percent slopes	4.6	6.0%
254B	Merrimac fine sandy loam, 3 to 8 percent slopes	4.3	5.7%
255A	Windsor loamy sand, 0 to 3 percent slopes	6.9	9.1%
306B	Paxton fine sandy loam, 0 to 8 percent slopes, very stony	1.6	2.1%
617	Pits - Udorthents complex, gravelly	25.8	33.9%
Totals for Area of Interest		**75.9**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties

and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Bristol County, Massachusetts, Northern Part

43A—Scarboro mucky fine sandy loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2svky
Elevation: 0 to 1,320 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 250 days
Farmland classification: Not prime farmland

Map Unit Composition

Scarboro and similar soils: 80 percent
Minor components: 20 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Scarboro

Setting

Landform: Drainageways, outwash deltas, outwash terraces, depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope, tread, dip
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Sandy glaciofluvial deposits derived from schist and/or sandy glaciofluvial deposits derived from gneiss and/or sandy glaciofluvial deposits derived from granite

Typical profile

Oe - 0 to 3 inches: mucky peat
A - 3 to 11 inches: mucky fine sandy loam
Cg1 - 11 to 21 inches: sand
Cg2 - 21 to 65 inches: gravelly coarse sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (1.42 to 14.17 in/hr)
Depth to water table: About 0 to 2 inches
Frequency of flooding: None
Frequency of ponding: Frequent
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 4.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: A/D
Ecological site: F144AY031MA - Very Wet Outwash
Hydric soil rating: Yes

Minor Components

Swansea

Percent of map unit: 10 percent
Landform: Bogs, swamps
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Wareham

Percent of map unit: 5 percent
Landform: Depressions
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Walpole

Percent of map unit: 5 percent
Landform: Deltas, depressions, outwash terraces, depressions, outwash plains
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread, talf, dip
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

52A—Freetown muck, 0 to 1 percent slopes

Map Unit Setting

National map unit symbol: 2t2q9
Elevation: 0 to 1,110 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Freetown and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Freetown

Setting

Landform: Depressions, depressions, swamps, kettles, marshes, bogs
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave
Across-slope shape: Concave
Parent material: Highly decomposed organic material

Typical profile

Oe - 0 to 2 inches: mucky peat
Oa - 2 to 79 inches: muck

Properties and qualities

Slope: 0 to 1 percent
Surface area covered with cobbles, stones or boulders: 0.0 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to high (0.14 to 14.17 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: Rare
Frequency of ponding: Frequent
Available water supply, 0 to 60 inches: Very high (about 19.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: B/D
Ecological site: F144AY043MA - Acidic Organic Wetlands
Hydric soil rating: Yes

Minor Components

Whitman

Percent of map unit: 5 percent
Landform: Drainageways, depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Swansea

Percent of map unit: 5 percent
Landform: Bogs, swamps, marshes, depressions, depressions, kettles
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Scarboro

Percent of map unit: 5 percent
Landform: Drainageways, depressions
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Base slope, tread, dip
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

245B—Hinckley loamy sand, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2svm8
Elevation: 0 to 1,430 feet
Mean annual precipitation: 36 to 53 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 250 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Hinckley and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hinckley

Setting

Landform: Outwash deltas, outwash terraces, kames, kame terraces, moraines, eskers, outwash plains
Landform position (two-dimensional): Summit, shoulder, backslope, footslope
Landform position (three-dimensional): Side slope, crest, nose slope, base slope, riser, tread
Down-slope shape: Concave, convex, linear
Across-slope shape: Convex, linear, concave
Parent material: Sandy and gravelly glaciofluvial deposits derived from gneiss and/or granite and/or schist

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material
A - 1 to 8 inches: loamy sand
Bw1 - 8 to 11 inches: gravelly loamy sand
Bw2 - 11 to 16 inches: gravelly loamy sand
BC - 16 to 19 inches: very gravelly loamy sand
C - 19 to 65 inches: very gravelly sand

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 99.90 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Very low (about 3.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: A
Ecological site: F144AY022MA - Dry Outwash
Hydric soil rating: No

Minor Components

Windsor

Percent of map unit: 8 percent
Landform: Outwash deltas, outwash terraces, moraines, eskers, kames, outwash plains, kame terraces
Landform position (two-dimensional): Summit, shoulder, backslope, footslope
Landform position (three-dimensional): Side slope, crest, nose slope, base slope, riser, tread
Down-slope shape: Concave, convex, linear
Across-slope shape: Convex, linear, concave
Hydric soil rating: No

Sudbury

Percent of map unit: 5 percent
Landform: Outwash deltas, outwash terraces, moraines, outwash plains, kame terraces
Landform position (two-dimensional): Backslope, footslope
Landform position (three-dimensional): Side slope, head slope, base slope, tread
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear
Hydric soil rating: No

Agawam

Percent of map unit: 2 percent
Landform: Outwash deltas, outwash terraces, moraines, eskers, kames, outwash plains, kame terraces
Landform position (two-dimensional): Summit, shoulder, backslope, footslope
Landform position (three-dimensional): Side slope, crest, nose slope, base slope, riser, tread
Down-slope shape: Concave, convex, linear
Across-slope shape: Convex, linear, concave
Hydric soil rating: No

245C—Hinckley loamy sand, 8 to 15 percent slopes

Map Unit Setting

National map unit symbol: 2svm9
Elevation: 0 to 1,480 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Hinckley and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hinckley

Setting

Landform: Outwash deltas, outwash terraces, moraines, eskers, kames, outwash plains, kame terraces
Landform position (two-dimensional): Shoulder, backslope, footslope, toeslope
Landform position (three-dimensional): Side slope, crest, head slope, nose slope, riser
Down-slope shape: Concave, convex, linear
Across-slope shape: Convex, linear, concave
Parent material: Sandy and gravelly glaciofluvial deposits derived from gneiss and/or granite and/or schist

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material
A - 1 to 8 inches: loamy sand
Bw1 - 8 to 11 inches: gravelly loamy sand
Bw2 - 11 to 16 inches: gravelly loamy sand
BC - 16 to 19 inches: very gravelly loamy sand
C - 19 to 65 inches: very gravelly sand

Properties and qualities

Slope: 8 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 99.90 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 3.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: A
Ecological site: F144AY022MA - Dry Outwash
Hydric soil rating: No

Minor Components

Sudbury

Percent of map unit: 5 percent
Landform: Outwash deltas, moraines, outwash plains, kame terraces, outwash terraces
Landform position (two-dimensional): Backslope, footslope
Landform position (three-dimensional): Base slope, tread
Down-slope shape: Concave, linear
Across-slope shape: Concave, linear

Hydric soil rating: No

Windsor

Percent of map unit: 5 percent
Landform: Moraines, eskers, kames, outwash deltas, outwash terraces, outwash plains, kame terraces
Landform position (two-dimensional): Shoulder, backslope, footslope, toeslope
Landform position (three-dimensional): Side slope, crest, head slope, nose slope, riser
Down-slope shape: Concave, convex, linear
Across-slope shape: Convex, linear, concave
Hydric soil rating: No

Merrimac

Percent of map unit: 5 percent
Landform: Kames, outwash plains, outwash terraces, moraines, eskers
Landform position (two-dimensional): Shoulder, backslope, footslope, toeslope
Landform position (three-dimensional): Side slope, crest, head slope, nose slope, riser
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

245D—Hinckley loamy sand, 15 to 25 percent slopes

Map Unit Setting

National map unit symbol: 2svmc
Elevation: 0 to 1,460 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Hinckley and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hinckley

Setting

Landform: Kames, kame terraces, outwash deltas, outwash terraces, moraines, eskers, outwash plains
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope, crest, head slope, nose slope, riser
Down-slope shape: Concave, convex, linear
Across-slope shape: Convex, linear, concave
Parent material: Sandy and gravelly glaciofluvial deposits derived from gneiss and/or granite and/or schist

Typical profile

Oe - 0 to 1 inches: moderately decomposed plant material
A - 1 to 8 inches: loamy sand
Bw1 - 8 to 11 inches: gravelly loamy sand
Bw2 - 11 to 16 inches: gravelly loamy sand
BC - 16 to 19 inches: very gravelly loamy sand
C - 19 to 65 inches: very gravelly sand

Properties and qualities

Slope: 15 to 25 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 99.90 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 3.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: A
Ecological site: F144AY022MA - Dry Outwash
Hydric soil rating: No

Minor Components

Merrimac

Percent of map unit: 8 percent
Landform: Eskers, outwash terraces, kames, outwash plains, moraines
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope, crest, head slope, nose slope, riser
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

Windsor

Percent of map unit: 5 percent
Landform: Kames, kame terraces, moraines, eskers, outwash deltas, outwash terraces, outwash plains
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope, crest, head slope, nose slope, riser
Down-slope shape: Concave, convex, linear
Across-slope shape: Convex, linear, concave
Hydric soil rating: No

Sudbury

Percent of map unit: 2 percent
Landform: Eskers, kame terraces, outwash deltas, moraines, outwash plains, outwash terraces
Landform position (two-dimensional): Backslope, footslope

Landform position (three-dimensional): Base slope, tread
Down-slope shape: Convex, concave, linear
Across-slope shape: Convex, concave, linear
Hydric soil rating: No

254A—Merrimac fine sandy loam, 0 to 3 percent slopes

Map Unit Setting

National map unit symbol: 2tyqr
Elevation: 0 to 1,100 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Merrimac and similar soils: 86 percent
Minor components: 14 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Merrimac

Setting

Landform: Outwash plains, outwash terraces, moraines, eskers, kames
Landform position (two-dimensional): Summit, shoulder, backslope, footslope
Landform position (three-dimensional): Side slope, crest, riser, tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy glaciofluvial deposits derived from granite, schist, and gneiss over sandy and gravelly glaciofluvial deposits derived from granite, schist, and gneiss

Typical profile

Ap - 0 to 10 inches: fine sandy loam
Bw1 - 10 to 22 inches: fine sandy loam
Bw2 - 22 to 26 inches: stratified gravel to gravelly loamy sand
2C - 26 to 65 inches: stratified gravel to very gravelly sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 99.90 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 2 percent
Maximum salinity: Nonsaline (0.0 to 1.4 mmhos/cm)

Sodium adsorption ratio, maximum: 1.0
Available water supply, 0 to 60 inches: Low (about 4.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 1
Hydrologic Soil Group: A
Ecological site: F145XY008MA - Dry Outwash
Hydric soil rating: No

Minor Components

Hinckley

Percent of map unit: 5 percent
Landform: Deltas, kames, eskers, outwash plains
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Side slope, head slope, nose slope, crest, rise
Down-slope shape: Convex
Across-slope shape: Convex, linear
Hydric soil rating: No

Sudbury

Percent of map unit: 5 percent
Landform: Deltas, terraces, outwash plains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Windsor

Percent of map unit: 3 percent
Landform: Dunes, deltas, outwash terraces, outwash plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Tread, riser
Down-slope shape: Convex, linear
Across-slope shape: Convex, linear
Hydric soil rating: No

Walpole

Percent of map unit: 1 percent
Landform: Depressions
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: F144AY028MA - Wet Outwash
Hydric soil rating: Yes

254B—Merrimac fine sandy loam, 3 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2tyqs
Elevation: 0 to 1,290 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Merrimac and similar soils: 86 percent
Minor components: 14 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Merrimac

Setting

Landform: Outwash plains, outwash terraces, moraines, eskers, kames
Landform position (two-dimensional): Summit, shoulder, backslope, footslope
Landform position (three-dimensional): Side slope, crest, riser, tread
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Loamy glaciofluvial deposits derived from granite, schist, and gneiss over sandy and gravelly glaciofluvial deposits derived from granite, schist, and gneiss

Typical profile

Ap - 0 to 10 inches: fine sandy loam
Bw1 - 10 to 22 inches: fine sandy loam
Bw2 - 22 to 26 inches: stratified gravel to gravelly loamy sand
2C - 26 to 65 inches: stratified gravel to very gravelly sand

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 99.90 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 2 percent
Maximum salinity: Nonsaline (0.0 to 1.4 mmhos/cm)
Sodium adsorption ratio, maximum: 1.0
Available water supply, 0 to 60 inches: Low (about 4.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified

Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: A
Ecological site: F145XY008MA - Dry Outwash
Hydric soil rating: No

Minor Components

Hinckley
Percent of map unit: 5 percent
Landform: Deltas, kames, eskers, outwash plains
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Side slope, head slope, nose slope, crest, rise
Down-slope shape: Convex
Across-slope shape: Convex, linear
Hydric soil rating: No

Sudbury
Percent of map unit: 5 percent
Landform: Deltas, terraces, outwash plains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread, dip
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Windsor
Percent of map unit: 3 percent
Landform: Dunes, deltas, outwash terraces, outwash plains
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Tread, riser
Down-slope shape: Convex, linear
Across-slope shape: Convex, linear
Hydric soil rating: No

Walpole
Percent of map unit: 1 percent
Landform: Depressions
Landform position (three-dimensional): Tread
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: F144AY028MA - Wet Outwash
Hydric soil rating: Yes

255A—Windsor loamy sand, 0 to 3 percent slopes

Map Unit Setting
National map unit symbol: 2svkg
Elevation: 0 to 990 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F

Frost-free period: 140 to 240 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Windsor, loamy sand, and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Windsor, Loamy Sand

Setting

Landform: Outwash plains, outwash terraces, deltas, dunes
Landform position (three-dimensional): Tread, riser
Down-slope shape: Linear, convex
Across-slope shape: Linear, convex
Parent material: Loose sandy glaciofluvial deposits derived from granite and/or loose sandy glaciofluvial deposits derived from schist and/or loose sandy glaciofluvial deposits derived from gneiss

Typical profile

O - 0 to 1 inches: moderately decomposed plant material
A - 1 to 3 inches: loamy sand
Bw - 3 to 25 inches: loamy sand
C - 25 to 65 inches: sand

Properties and qualities

Slope: 0 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to very high (1.42 to 99.90 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 3.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: A
Ecological site: F144AY022MA - Dry Outwash
Hydric soil rating: No

Minor Components

Deerfield, loamy sand

Percent of map unit: 10 percent
Landform: Deltas, terraces, outwash plains
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Tread, talf
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: No

Hinckley, loamy sand

Percent of map unit: 5 percent
Landform: Deltas, kames, eskers, outwash plains
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Side slope, crest, head slope, nose slope, rise
Down-slope shape: Convex
Across-slope shape: Convex, linear
Hydric soil rating: No

306B—Paxton fine sandy loam, 0 to 8 percent slopes, very stony

Map Unit Setting

National map unit symbol: 2w673
Elevation: 0 to 1,340 feet
Mean annual precipitation: 36 to 71 inches
Mean annual air temperature: 39 to 55 degrees F
Frost-free period: 140 to 240 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Paxton, very stony, and similar soils: 85 percent
Minor components: 15 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Paxton, Very Stony

Setting

Landform: Ground moraines, hills, drumlins
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Side slope, crest
Down-slope shape: Convex, linear
Across-slope shape: Linear, convex
Parent material: Coarse-loamy lodgment till derived from gneiss, granite, and/or schist

Typical profile

Oe - 0 to 2 inches: moderately decomposed plant material
A - 2 to 10 inches: fine sandy loam
Bw1 - 10 to 17 inches: fine sandy loam
Bw2 - 17 to 28 inches: fine sandy loam
Cd - 28 to 67 inches: gravelly fine sandy loam

Properties and qualities

Slope: 0 to 8 percent
Surface area covered with cobbles, stones or boulders: 1.6 percent
Depth to restrictive feature: 20 to 43 inches to densic material
Drainage class: Well drained
Runoff class: Medium

Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.14 in/hr)
Depth to water table: About 18 to 37 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline (0.0 to 1.9 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 4.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: C
Ecological site: F144AY007CT - Well Drained Dense Till Uplands
Hydric soil rating: No

Minor Components

Woodbridge, very stony

Percent of map unit: 8 percent
Landform: Ground moraines, hills, drumlins
Landform position (two-dimensional): Summit, backslope, footslope
Landform position (three-dimensional): Side slope, crest
Down-slope shape: Concave
Across-slope shape: Linear
Hydric soil rating: No

Ridgebury, very stony

Percent of map unit: 4 percent
Landform: Drumlins, drainageways, depressions, hills, ground moraines
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Base slope, head slope
Down-slope shape: Concave
Across-slope shape: Concave
Hydric soil rating: Yes

Charlton, very stony

Percent of map unit: 3 percent
Landform: Hills
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Side slope, crest
Down-slope shape: Convex
Across-slope shape: Convex
Hydric soil rating: No

617—Pits - Udorthents complex, gravelly

Map Unit Setting

National map unit symbol: tghf
Elevation: 0 to 3,000 feet
Mean annual precipitation: 45 to 54 inches
Mean annual air temperature: 43 to 54 degrees F

Frost-free period: 120 to 240 days
Farmland classification: Not prime farmland

Map Unit Composition

Pits, gravelly: 60 percent
Udorthents, gravelly, and similar soils: 40 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pits, Gravelly

Typical profile

H1 - 0 to 6 inches: extremely gravelly sand
H2 - 6 to 60 inches: very gravelly coarse sand

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 8s
Hydric soil rating: Unranked

Description of Udorthents, Gravelly

Typical profile

H1 - 0 to 6 inches: variable
H2 - 6 to 60 inches: variable

Properties and qualities

Slope: 0 to 25 percent
Depth to restrictive feature: More than 80 inches
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to very high (0.06 to 20.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None

Interpretive groups

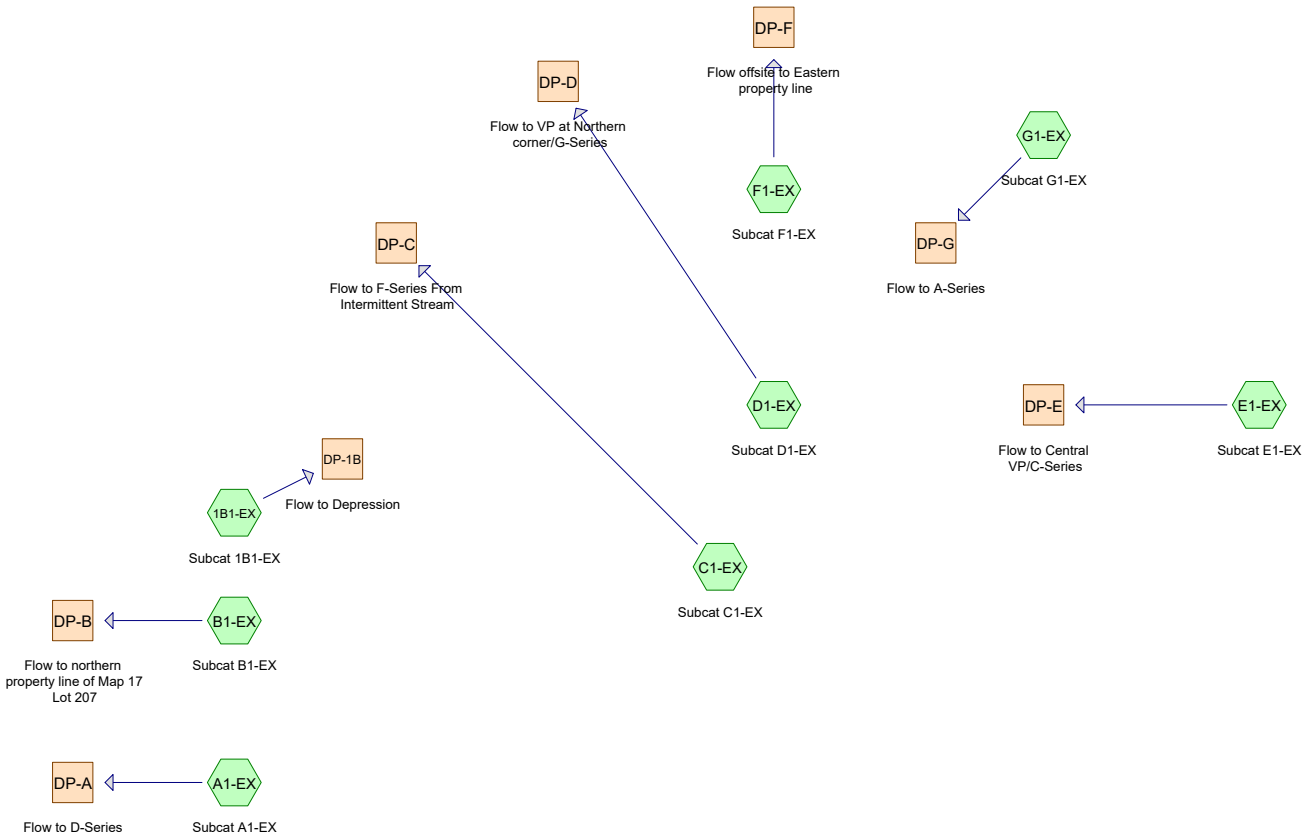
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: A
Hydric soil rating: Unranked

APPENDIX C

SUPPORTING CALCULATIONS

HydroCAD Drainage Analysis
TSS Calculations
Sediment Forebay Calculations
Water Quality Volume Calculations
Groundwater Recharge Calculations
Pipe Capacity & Drainage Inlet Calculations

HydroCAD Drainage Analysis



Subcat Reach Pond Link

Routing Diagram for 315-430 HydroCAD Pre
Prepared by CEC Inc, Printed 12/13/2024
HydroCAD® 10.20-5c s/n 01006 © 2023 HydroCAD Software Solutions LLC

Rainfall Events Listing

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	2-Year	Type III 24-hr		Default	24.00	1	3.40	2
2	10-Year	Type III 24-hr		Default	24.00	1	4.80	2
3	25-Year	Type III 24-hr		Default	24.00	1	5.60	2
4	100-Year	Type III 24-hr		Default	24.00	1	7.00	2

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
3.462	49	50-75% Grass cover, Fair, HSG A (E1-EX)
0.295	39	>75% Grass cover, Good, HSG A (C1-EX)
0.235	98	Ex. Roofs, HSG A (C1-EX)
0.906	30	Ex. Woods, Good, HSG A (C1-EX)
3.029	39	Ex.>75% Grass cover, Good, HSG A (C1-EX)
2.379	74	Fallow, crop residue, Good, HSG A (E1-EX, G1-EX)
0.600	96	Gravel surface, HSG A (C1-EX, E1-EX, F1-EX)
33.547	30	Woods, Good, HSG A (1B1-EX, A1-EX, B1-EX, C1-EX, D1-EX, E1-EX, F1-EX, G1-EX)
2.307	39	ex. >75% Grass cover, Good, HSG A (1B1-EX, A1-EX, E1-EX)
0.117	98	ex. Unconnected roofs, HSG A (1B1-EX, A1-EX, E1-EX)
0.179	30	ex. Woods, Good, HSG A (D1-EX)
0.051	30	ex.Woods, Good, HSG A (1B1-EX)
0.253	98	massasoit road (E1-EX)
47.356	**36**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
47.104	HSG A	1B1-EX, A1-EX, B1-EX, C1-EX, D1-EX, E1-EX, F1-EX, G1-EX
0.000	HSG B	
0.000	HSG C	
0.000	HSG D	
0.253	Other	E1-EX
47.356		**TOTAL AREA**

Summary for Subcatchment 1B1-EX: Subcat 1B1-EX

[45] Hint: Runoff=Zero

Runoff = 0.0 cfs @ 5.00 hrs, Volume= 0.000 af, Depth= 0.00"
Routed to Reach DP-1B : Flow to Depression

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.40"

	Area (sf)	CN	Description
	71,663	30	Woods, Good, HSG A
*	2,200	30	ex.Woods, Good, HSG A
*	12,550	39	ex. >75% Grass cover, Good, HSG A
*	640	98	ex. Unconnected roofs, HSG A
	87,053	32	Weighted Average
	86,413		99.26% Pervious Area
	640		0.74% Impervious Area
	640		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.4	50	0.0060	0.04		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.78"
1.1	190	0.0350	3.01		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
22.5	240	Total			

Summary for Subcatchment A1-EX: Subcat A1-EX

[45] Hint: Runoff=Zero

Runoff = 0.0 cfs @ 5.00 hrs, Volume= 0.000 af, Depth= 0.00"
Routed to Reach DP-A : Flow to D-Series

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.40"

	Area (sf)	CN	Adj	Description
	45,515	30		Woods, Good, HSG A
*	16,433	39		ex. >75% Grass cover, Good, HSG A
*	1,450	98		ex. Unconnected roofs, HSG A
	63,398	34	33	Weighted Average, UI Adjusted
	61,948			97.71% Pervious Area
	1,450			2.29% Impervious Area
	1,450			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.1	50	0.0070	0.04		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.78"
0.6	120	0.0400	3.22		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
20.7	170	Total			

Summary for Subcatchment B1-EX: Subcat B1-EX

[45] Hint: Runoff=Zero

Runoff = 0.0 cfs @ 5.00 hrs, Volume= 0.000 af, Depth= 0.00"
Routed to Reach DP-B : Flow to northern property line of Map 17 Lot 207

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.40"

Area (sf)	CN	Description
40,760	30	Woods, Good, HSG A
40,760		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.6	50	0.0450	0.09		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.78"
1.3	200	0.0240	2.49		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
10.9	250	Total			

Summary for Subcatchment C1-EX: Subcat C1-EX

[45] Hint: Runoff=Zero

Runoff = 0.0 cfs @ 5.00 hrs, Volume= 0.000 af, Depth= 0.00"
Routed to Reach DP-C : Flow to F-Series From Intermittent Stream

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.40"

	Area (sf)	CN	Description
	12,830	39	>75% Grass cover, Good, HSG A
	5,820	96	Gravel surface, HSG A
*	444,397	30	Woods, Good, HSG A
*	39,450	30	Ex. Woods, Good, HSG A
*	131,950	39	Ex.>75% Grass cover, Good, HSG A
*	10,220	98	Ex. Roofs, HSG A
	644,667	34	Weighted Average
	634,447		98.41% Pervious Area
	10,220		1.59% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.4	50	0.0060	0.04		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.78"
0.4	80	0.0550	3.78		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
21.8	130	Total			

Summary for Subcatchment D1-EX: Subcat D1-EX

[45] Hint: Runoff=Zero

Runoff = 0.0 cfs @ 5.00 hrs, Volume= 0.000 af, Depth= 0.00"
Routed to Reach DP-D : Flow to VP at Northern corner/G-Series

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.40"

	Area (sf)	CN	Description
	274,370	30	Woods, Good, HSG A
*	7,800	30	ex. Woods, Good, HSG A
	282,170	30	Weighted Average
	282,170		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
25.2	50	0.0040	0.03		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.78"
3.9	550	0.0210	2.33		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
29.1	600	Total			

Summary for Subcatchment E1-EX: Subcat E1-EX

[73] Warning: Peak may fall outside time span

Runoff = 0.0 cfs @ 20.00 hrs, Volume= 0.005 af, Depth> 0.00"
Routed to Reach DP-E : Flow to Central VP/C-Series

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.40"

	Area (sf)	CN	Description
	150,785	49	50-75% Grass cover, Fair, HSG A
	19,660	96	Gravel surface, HSG A
	435,238	30	Woods, Good, HSG A
*	11,000	98	massasoit road
*	71,500	39	ex. >75% Grass cover, Good, HSG A
*	3,000	98	ex. Unconnected roofs, HSG A
	32,300	74	Fallow, crop residue, Good, HSG A
	723,483	40	Weighted Average
	709,483		98.06% Pervious Area
	14,000		1.94% Impervious Area
	3,000		21.43% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.2	50	0.0020	0.05		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.78"
8.1	930	0.0140	1.90		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
23.3	980	Total			

Summary for Subcatchment F1-EX: Subcat F1-EX

[45] Hint: Runoff=Zero

Runoff = 0.0 cfs @ 5.00 hrs, Volume= 0.000 af, Depth= 0.00"
Routed to Reach DP-F : Flow offsite to Eastern property line

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.40"

Area (sf)	CN	Description
656	96	Gravel surface, HSG A
87,859	30	Woods, Good, HSG A
88,515	30	Weighted Average
88,515		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.9	50	0.0260	0.07		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.78"
1.4	220	0.0260	2.60		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
13.3	270	Total			

Summary for Subcatchment G1-EX: Subcat G1-EX

Runoff = 0.4 cfs @ 12.37 hrs, Volume= 0.060 af, Depth> 0.24"
Routed to Reach DP-G : Flow to A-Series

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.40"

Area (sf)	CN	Description
61,490	30	Woods, Good, HSG A
71,310	74	Fallow, crop residue, Good, HSG A
132,800	54	Weighted Average
132,800		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.3	50	0.0020	0.11		**Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.78"
1.7	420	0.0640	4.07		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
9.0	470	Total			

Summary for Reach DP-1B: Flow to Depression

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 1.998 ac, 0.74% Impervious, Inflow Depth = 0.00" for 2-Year event
Inflow = 0.0 cfs @ 5.00 hrs, Volume= 0.000 af
Outflow = 0.0 cfs @ 5.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach DP-A: Flow to D-Series

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 1.455 ac, 2.29% Impervious, Inflow Depth = 0.00" for 2-Year event
Inflow = 0.0 cfs @ 5.00 hrs, Volume= 0.000 af
Outflow = 0.0 cfs @ 5.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach DP-B: Flow to northern property line of Map 17 Lot 207

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 0.936 ac, 0.00% Impervious, Inflow Depth = 0.00" for 2-Year event
Inflow = 0.0 cfs @ 5.00 hrs, Volume= 0.000 af
Outflow = 0.0 cfs @ 5.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach DP-C: Flow to F-Series From Intermittent Stream

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 14.800 ac, 1.59% Impervious, Inflow Depth = 0.00" for 2-Year event
Inflow = 0.0 cfs @ 5.00 hrs, Volume= 0.000 af
Outflow = 0.0 cfs @ 5.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach DP-D: Flow to VP at Northern corner/G-Series

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 6.478 ac, 0.00% Impervious, Inflow Depth = 0.00" for 2-Year event
Inflow = 0.0 cfs @ 5.00 hrs, Volume= 0.000 af
Outflow = 0.0 cfs @ 5.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach DP-E: Flow to Central VP/C-Series

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 16.609 ac, 1.94% Impervious, Inflow Depth > 0.00" for 2-Year event
Inflow = 0.0 cfs @ 20.00 hrs, Volume= 0.005 af
Outflow = 0.0 cfs @ 20.00 hrs, Volume= 0.005 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach DP-F: Flow offsite to Eastern property line

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 2.032 ac, 0.00% Impervious, Inflow Depth = 0.00" for 2-Year event
Inflow = 0.0 cfs @ 5.00 hrs, Volume= 0.000 af
Outflow = 0.0 cfs @ 5.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach DP-G: Flow to A-Series

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 3.049 ac, 0.00% Impervious, Inflow Depth > 0.24" for 2-Year event
Inflow = 0.4 cfs @ 12.37 hrs, Volume= 0.060 af
Outflow = 0.4 cfs @ 12.37 hrs, Volume= 0.060 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Subcatchment 1B1-EX: Subcat 1B1-EX

[73] Warning: Peak may fall outside time span

Runoff = 0.0 cfs @ 20.00 hrs, Volume= 0.001 af, Depth> 0.00"
Routed to Reach DP-1B : Flow to Depression

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.80"

	Area (sf)	CN	Description
	71,663	30	Woods, Good, HSG A
*	2,200	30	ex.Woods, Good, HSG A
*	12,550	39	ex. >75% Grass cover, Good, HSG A
*	640	98	ex. Unconnected roofs, HSG A
	87,053	32	Weighted Average
	86,413		99.26% Pervious Area
	640		0.74% Impervious Area
	640		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.4	50	0.0060	0.04		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.78"
1.1	190	0.0350	3.01		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
22.5	240	Total			

Summary for Subcatchment A1-EX: Subcat A1-EX

[73] Warning: Peak may fall outside time span

Runoff = 0.0 cfs @ 20.00 hrs, Volume= 0.002 af, Depth> 0.01"
Routed to Reach DP-A : Flow to D-Series

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.80"

	Area (sf)	CN	Adj	Description
	45,515	30		Woods, Good, HSG A
*	16,433	39		ex. >75% Grass cover, Good, HSG A
*	1,450	98		ex. Unconnected roofs, HSG A
	63,398	34	33	Weighted Average, UI Adjusted
	61,948			97.71% Pervious Area
	1,450			2.29% Impervious Area
	1,450			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.1	50	0.0070	0.04		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.78"
0.6	120	0.0400	3.22		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
20.7	170	Total			

Summary for Subcatchment B1-EX: Subcat B1-EX

[45] Hint: Runoff=Zero

Runoff = 0.0 cfs @ 5.00 hrs, Volume= 0.000 af, Depth= 0.00"
Routed to Reach DP-B : Flow to northern property line of Map 17 Lot 207

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.80"

Area (sf)	CN	Description
40,760	30	Woods, Good, HSG A
40,760		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.6	50	0.0450	0.09		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.78"
1.3	200	0.0240	2.49		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
10.9	250	Total			

Summary for Subcatchment C1-EX: Subcat C1-EX

Runoff = 0.1 cfs @ 17.09 hrs, Volume= 0.029 af, Depth> 0.02"
Routed to Reach DP-C : Flow to F-Series From Intermittent Stream

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.80"

	Area (sf)	CN	Description
	12,830	39	>75% Grass cover, Good, HSG A
	5,820	96	Gravel surface, HSG A
*	444,397	30	Woods, Good, HSG A
*	39,450	30	Ex. Woods, Good, HSG A
*	131,950	39	Ex.>75% Grass cover, Good, HSG A
*	10,220	98	Ex. Roofs, HSG A
	644,667	34	Weighted Average
	634,447		98.41% Pervious Area
	10,220		1.59% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.4	50	0.0060	0.04		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.78"
0.4	80	0.0550	3.78		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
21.8	130	Total			

Summary for Subcatchment D1-EX: Subcat D1-EX

[45] Hint: Runoff=Zero

Runoff = 0.0 cfs @ 5.00 hrs, Volume= 0.000 af, Depth= 0.00"
Routed to Reach DP-D : Flow to VP at Northern corner/G-Series

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.80"

	Area (sf)	CN	Description
	274,370	30	Woods, Good, HSG A
*	7,800	30	ex. Woods, Good, HSG A
	282,170	30	Weighted Average
	282,170		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
25.2	50	0.0040	0.03		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.78"
3.9	550	0.0210	2.33		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
29.1	600	Total			

Summary for Subcatchment E1-EX: Subcat E1-EX

Runoff = 0.5 cfs @ 13.03 hrs, Volume= 0.206 af, Depth> 0.15"
Routed to Reach DP-E : Flow to Central VP/C-Series

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.80"

	Area (sf)	CN	Description
	150,785	49	50-75% Grass cover, Fair, HSG A
	19,660	96	Gravel surface, HSG A
	435,238	30	Woods, Good, HSG A
*	11,000	98	massasoit road
*	71,500	39	ex. >75% Grass cover, Good, HSG A
*	3,000	98	ex. Unconnected roofs, HSG A
	32,300	74	Fallow, crop residue, Good, HSG A
	723,483	40	Weighted Average
	709,483		98.06% Pervious Area
	14,000		1.94% Impervious Area
	3,000		21.43% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.2	50	0.0020	0.05		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.78"
8.1	930	0.0140	1.90		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
23.3	980	Total			

Summary for Subcatchment F1-EX: Subcat F1-EX

[45] Hint: Runoff=Zero

Runoff = 0.0 cfs @ 5.00 hrs, Volume= 0.000 af, Depth= 0.00"
Routed to Reach DP-F : Flow offsite to Eastern property line

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.80"

	Area (sf)	CN	Description
	656	96	Gravel surface, HSG A
	87,859	30	Woods, Good, HSG A
	88,515	30	Weighted Average
	88,515		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.9	50	0.0260	0.07		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.78"
1.4	220	0.0260	2.60		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
13.3	270	Total			

Summary for Subcatchment G1-EX: Subcat G1-EX

Runoff = 1.9 cfs @ 12.16 hrs, Volume= 0.185 af, Depth> 0.73"
Routed to Reach DP-G : Flow to A-Series

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.80"

Area (sf)	CN	Description
61,490	30	Woods, Good, HSG A
71,310	74	Fallow, crop residue, Good, HSG A
132,800	54	Weighted Average
132,800		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.3	50	0.0020	0.11		**Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.78"
1.7	420	0.0640	4.07		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
9.0	470	Total			

Summary for Reach DP-1B: Flow to Depression

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 1.998 ac, 0.74% Impervious, Inflow Depth > 0.00" for 10-Year event
Inflow = 0.0 cfs @ 20.00 hrs, Volume= 0.001 af
Outflow = 0.0 cfs @ 20.00 hrs, Volume= 0.001 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach DP-A: Flow to D-Series

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 1.455 ac, 2.29% Impervious, Inflow Depth > 0.01" for 10-Year event
Inflow = 0.0 cfs @ 20.00 hrs, Volume= 0.002 af
Outflow = 0.0 cfs @ 20.00 hrs, Volume= 0.002 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach DP-B: Flow to northern property line of Map 17 Lot 207

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 0.936 ac, 0.00% Impervious, Inflow Depth = 0.00" for 10-Year event
Inflow = 0.0 cfs @ 5.00 hrs, Volume= 0.000 af
Outflow = 0.0 cfs @ 5.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach DP-C: Flow to F-Series From Intermittent Stream

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 14.800 ac, 1.59% Impervious, Inflow Depth > 0.02" for 10-Year event
Inflow = 0.1 cfs @ 17.09 hrs, Volume= 0.029 af
Outflow = 0.1 cfs @ 17.09 hrs, Volume= 0.029 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach DP-D: Flow to VP at Northern corner/G-Series

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 6.478 ac, 0.00% Impervious, Inflow Depth = 0.00" for 10-Year event
Inflow = 0.0 cfs @ 5.00 hrs, Volume= 0.000 af
Outflow = 0.0 cfs @ 5.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach DP-E: Flow to Central VP/C-Series

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 16.609 ac, 1.94% Impervious, Inflow Depth > 0.15" for 10-Year event
Inflow = 0.5 cfs @ 13.03 hrs, Volume= 0.206 af
Outflow = 0.5 cfs @ 13.03 hrs, Volume= 0.206 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach DP-F: Flow offsite to Eastern property line

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 2.032 ac, 0.00% Impervious, Inflow Depth = 0.00" for 10-Year event
Inflow = 0.0 cfs @ 5.00 hrs, Volume= 0.000 af
Outflow = 0.0 cfs @ 5.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach DP-G: Flow to A-Series

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 3.049 ac, 0.00% Impervious, Inflow Depth > 0.73" for 10-Year event
Inflow = 1.9 cfs @ 12.16 hrs, Volume= 0.185 af
Outflow = 1.9 cfs @ 12.16 hrs, Volume= 0.185 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Subcatchment 1B1-EX: Subcat 1B1-EX

Runoff = 0.0 cfs @ 15.56 hrs, Volume= 0.009 af, Depth> 0.05"
Routed to Reach DP-1B : Flow to Depression

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.60"

	Area (sf)	CN	Description
	71,663	30	Woods, Good, HSG A
*	2,200	30	ex.Woods, Good, HSG A
*	12,550	39	ex. >75% Grass cover, Good, HSG A
*	640	98	ex. Unconnected roofs, HSG A
	87,053	32	Weighted Average
	86,413		99.26% Pervious Area
	640		0.74% Impervious Area
	640		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.4	50	0.0060	0.04		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.78"
1.1	190	0.0350	3.01		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
22.5	240	Total			

Summary for Subcatchment A1-EX: Subcat A1-EX

Runoff = 0.0 cfs @ 15.21 hrs, Volume= 0.009 af, Depth> 0.08"
Routed to Reach DP-A : Flow to D-Series

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.60"

	Area (sf)	CN	Adj	Description
	45,515	30		Woods, Good, HSG A
*	16,433	39		ex. >75% Grass cover, Good, HSG A
*	1,450	98		ex. Unconnected roofs, HSG A
	63,398	34	33	Weighted Average, UI Adjusted
	61,948			97.71% Pervious Area
	1,450			2.29% Impervious Area
	1,450			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.1	50	0.0070	0.04		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.78"
0.6	120	0.0400	3.22		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
20.7	170	Total			

Summary for Subcatchment B1-EX: Subcat B1-EX

Runoff = 0.0 cfs @ 17.33 hrs, Volume= 0.002 af, Depth> 0.02"
Routed to Reach DP-B : Flow to northern property line of Map 17 Lot 207

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.60"

Area (sf)	CN	Description
40,760	30	Woods, Good, HSG A
40,760		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.6	50	0.0450	0.09		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.78"
1.3	200	0.0240	2.49		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
10.9	250	Total			

Summary for Subcatchment C1-EX: Subcat C1-EX

Runoff = 0.3 cfs @ 14.93 hrs, Volume= 0.125 af, Depth> 0.10"
Routed to Reach DP-C : Flow to F-Series From Intermittent Stream

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.60"

	Area (sf)	CN	Description
	12,830	39	>75% Grass cover, Good, HSG A
	5,820	96	Gravel surface, HSG A
*	444,397	30	Woods, Good, HSG A
*	39,450	30	Ex. Woods, Good, HSG A
*	131,950	39	Ex.>75% Grass cover, Good, HSG A
*	10,220	98	Ex. Roofs, HSG A
	644,667	34	Weighted Average
	634,447		98.41% Pervious Area
	10,220		1.59% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.4	50	0.0060	0.04		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.78"
0.4	80	0.0550	3.78		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
21.8	130	Total			

Summary for Subcatchment D1-EX: Subcat D1-EX

Runoff = 0.0 cfs @ 17.60 hrs, Volume= 0.010 af, Depth> 0.02"
Routed to Reach DP-D : Flow to VP at Northern corner/G-Series

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.60"

	Area (sf)	CN	Description
	274,370	30	Woods, Good, HSG A
*	7,800	30	ex. Woods, Good, HSG A
	282,170	30	Weighted Average
	282,170		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
25.2	50	0.0040	0.03		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.78"
3.9	550	0.0210	2.33		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
29.1	600	Total			

Summary for Subcatchment E1-EX: Subcat E1-EX

Runoff = 1.9 cfs @ 12.62 hrs, Volume= 0.435 af, Depth> 0.31"
Routed to Reach DP-E : Flow to Central VP/C-Series

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.60"

	Area (sf)	CN	Description
	150,785	49	50-75% Grass cover, Fair, HSG A
	19,660	96	Gravel surface, HSG A
	435,238	30	Woods, Good, HSG A
*	11,000	98	massasoit road
*	71,500	39	ex. >75% Grass cover, Good, HSG A
*	3,000	98	ex. Unconnected roofs, HSG A
	32,300	74	Fallow, crop residue, Good, HSG A
	723,483	40	Weighted Average
	709,483		98.06% Pervious Area
	14,000		1.94% Impervious Area
	3,000		21.43% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.2	50	0.0020	0.05		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.78"
8.1	930	0.0140	1.90		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
23.3	980	Total			

Summary for Subcatchment F1-EX: Subcat F1-EX

Runoff = 0.0 cfs @ 17.36 hrs, Volume= 0.003 af, Depth> 0.02"
Routed to Reach DP-F : Flow offsite to Eastern property line

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.60"

Area (sf)	CN	Description
656	96	Gravel surface, HSG A
87,859	30	Woods, Good, HSG A
88,515	30	Weighted Average
88,515		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.9	50	0.0260	0.07		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.78"
1.4	220	0.0260	2.60		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
13.3	270	Total			

Summary for Subcatchment G1-EX: Subcat G1-EX

Runoff = 3.3 cfs @ 12.15 hrs, Volume= 0.278 af, Depth> 1.09"
Routed to Reach DP-G : Flow to A-Series

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.60"

Area (sf)	CN	Description
61,490	30	Woods, Good, HSG A
71,310	74	Fallow, crop residue, Good, HSG A
132,800	54	Weighted Average
132,800		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.3	50	0.0020	0.11		**Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.78"
1.7	420	0.0640	4.07		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
9.0	470	Total			

Summary for Reach DP-1B: Flow to Depression

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 1.998 ac, 0.74% Impervious, Inflow Depth > 0.05" for 25-Year event
Inflow = 0.0 cfs @ 15.56 hrs, Volume= 0.009 af
Outflow = 0.0 cfs @ 15.56 hrs, Volume= 0.009 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach DP-A: Flow to D-Series

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 1.455 ac, 2.29% Impervious, Inflow Depth > 0.08" for 25-Year event
Inflow = 0.0 cfs @ 15.21 hrs, Volume= 0.009 af
Outflow = 0.0 cfs @ 15.21 hrs, Volume= 0.009 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach DP-B: Flow to northern property line of Map 17 Lot 207

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 0.936 ac, 0.00% Impervious, Inflow Depth > 0.02" for 25-Year event
Inflow = 0.0 cfs @ 17.33 hrs, Volume= 0.002 af
Outflow = 0.0 cfs @ 17.33 hrs, Volume= 0.002 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach DP-C: Flow to F-Series From Intermittent Stream

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 14.800 ac, 1.59% Impervious, Inflow Depth > 0.10" for 25-Year event
Inflow = 0.3 cfs @ 14.93 hrs, Volume= 0.125 af
Outflow = 0.3 cfs @ 14.93 hrs, Volume= 0.125 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach DP-D: Flow to VP at Northern corner/G-Series

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 6.478 ac, 0.00% Impervious, Inflow Depth > 0.02" for 25-Year event
Inflow = 0.0 cfs @ 17.60 hrs, Volume= 0.010 af
Outflow = 0.0 cfs @ 17.60 hrs, Volume= 0.010 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach DP-E: Flow to Central VP/C-Series

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 16.609 ac, 1.94% Impervious, Inflow Depth > 0.31" for 25-Year event
Inflow = 1.9 cfs @ 12.62 hrs, Volume= 0.435 af
Outflow = 1.9 cfs @ 12.62 hrs, Volume= 0.435 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach DP-F: Flow offsite to Eastern property line

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 2.032 ac, 0.00% Impervious, Inflow Depth > 0.02" for 25-Year event
Inflow = 0.0 cfs @ 17.36 hrs, Volume= 0.003 af
Outflow = 0.0 cfs @ 17.36 hrs, Volume= 0.003 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach DP-G: Flow to A-Series

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 3.049 ac, 0.00% Impervious, Inflow Depth > 1.09" for 25-Year event
Inflow = 3.3 cfs @ 12.15 hrs, Volume= 0.278 af
Outflow = 3.3 cfs @ 12.15 hrs, Volume= 0.278 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Subcatchment 1B1-EX: Subcat 1B1-EX

Runoff = 0.1 cfs @ 12.74 hrs, Volume= 0.041 af, Depth> 0.25"
Routed to Reach DP-1B : Flow to Depression

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=7.00"

	Area (sf)	CN	Description
	71,663	30	Woods, Good, HSG A
*	2,200	30	ex.Woods, Good, HSG A
*	12,550	39	ex. >75% Grass cover, Good, HSG A
*	640	98	ex. Unconnected roofs, HSG A
	87,053	32	Weighted Average
	86,413		99.26% Pervious Area
	640		0.74% Impervious Area
	640		100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.4	50	0.0060	0.04		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.78"
1.1	190	0.0350	3.01		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
22.5	240	Total			

Summary for Subcatchment A1-EX: Subcat A1-EX

Runoff = 0.1 cfs @ 12.64 hrs, Volume= 0.036 af, Depth> 0.30"
Routed to Reach DP-A : Flow to D-Series

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=7.00"

	Area (sf)	CN	Adj	Description
	45,515	30		Woods, Good, HSG A
*	16,433	39		ex. >75% Grass cover, Good, HSG A
*	1,450	98		ex. Unconnected roofs, HSG A
	63,398	34	33	Weighted Average, UI Adjusted
	61,948			97.71% Pervious Area
	1,450			2.29% Impervious Area
	1,450			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
20.1	50	0.0070	0.04		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.78"
0.6	120	0.0400	3.22		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
20.7	170	Total			

Summary for Subcatchment B1-EX: Subcat B1-EX

Runoff = 0.0 cfs @ 13.84 hrs, Volume= 0.013 af, Depth> 0.16"
Routed to Reach DP-B : Flow to northern property line of Map 17 Lot 207

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=7.00"

Area (sf)	CN	Description
40,760	30	Woods, Good, HSG A
40,760		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
9.6	50	0.0450	0.09		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.78"
1.3	200	0.0240	2.49		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
10.9	250	Total			

Summary for Subcatchment C1-EX: Subcat C1-EX

Runoff = 1.7 cfs @ 12.62 hrs, Volume= 0.432 af, Depth> 0.35"
Routed to Reach DP-C : Flow to F-Series From Intermittent Stream

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=7.00"

	Area (sf)	CN	Description
	12,830	39	>75% Grass cover, Good, HSG A
	5,820	96	Gravel surface, HSG A
*	444,397	30	Woods, Good, HSG A
*	39,450	30	Ex. Woods, Good, HSG A
*	131,950	39	Ex.>75% Grass cover, Good, HSG A
*	10,220	98	Ex. Roofs, HSG A
	644,667	34	Weighted Average
	634,447		98.41% Pervious Area
	10,220		1.59% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.4	50	0.0060	0.04		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.78"
0.4	80	0.0550	3.78		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
21.8	130	Total			

Summary for Subcatchment D1-EX: Subcat D1-EX

Runoff = 0.2 cfs @ 14.15 hrs, Volume= 0.085 af, Depth> 0.16"
Routed to Reach DP-D : Flow to VP at Northern corner/G-Series

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=7.00"

	Area (sf)	CN	Description
	274,370	30	Woods, Good, HSG A
*	7,800	30	ex. Woods, Good, HSG A
	282,170	30	Weighted Average
	282,170		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
25.2	50	0.0040	0.03		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.78"
3.9	550	0.0210	2.33		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
29.1	600	Total			

Summary for Subcatchment E1-EX: Subcat E1-EX

Runoff = 6.3 cfs @ 12.49 hrs, Volume= 0.997 af, Depth> 0.72"
Routed to Reach DP-E : Flow to Central VP/C-Series

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=7.00"

	Area (sf)	CN	Description
	150,785	49	50-75% Grass cover, Fair, HSG A
	19,660	96	Gravel surface, HSG A
	435,238	30	Woods, Good, HSG A
*	11,000	98	massasoit road
*	71,500	39	ex. >75% Grass cover, Good, HSG A
*	3,000	98	ex. Unconnected roofs, HSG A
	32,300	74	Fallow, crop residue, Good, HSG A
	723,483	40	Weighted Average
	709,483		98.06% Pervious Area
	14,000		1.94% Impervious Area
	3,000		21.43% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.2	50	0.0020	0.05		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.78"
8.1	930	0.0140	1.90		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
23.3	980	Total			

Summary for Subcatchment F1-EX: Subcat F1-EX

Runoff = 0.1 cfs @ 13.89 hrs, Volume= 0.027 af, Depth> 0.16"
Routed to Reach DP-F : Flow offsite to Eastern property line

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=7.00"

Area (sf)	CN	Description
656	96	Gravel surface, HSG A
87,859	30	Woods, Good, HSG A
88,515	30	Weighted Average
88,515		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.9	50	0.0260	0.07		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.78"
1.4	220	0.0260	2.60		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
13.3	270	Total			

Summary for Subcatchment G1-EX: Subcat G1-EX

Runoff = 5.9 cfs @ 12.14 hrs, Volume= 0.468 af, Depth> 1.84"
Routed to Reach DP-G : Flow to A-Series

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=7.00"

Area (sf)	CN	Description
61,490	30	Woods, Good, HSG A
71,310	74	Fallow, crop residue, Good, HSG A
132,800	54	Weighted Average
132,800		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.3	50	0.0020	0.11		**Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.78"
1.7	420	0.0640	4.07		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
9.0	470	Total			

Summary for Reach DP-1B: Flow to Depression

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 1.998 ac, 0.74% Impervious, Inflow Depth > 0.25" for 100-Year event
Inflow = 0.1 cfs @ 12.74 hrs, Volume= 0.041 af
Outflow = 0.1 cfs @ 12.74 hrs, Volume= 0.041 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach DP-A: Flow to D-Series

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 1.455 ac, 2.29% Impervious, Inflow Depth > 0.30" for 100-Year event
Inflow = 0.1 cfs @ 12.64 hrs, Volume= 0.036 af
Outflow = 0.1 cfs @ 12.64 hrs, Volume= 0.036 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach DP-B: Flow to northern property line of Map 17 Lot 207

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 0.936 ac, 0.00% Impervious, Inflow Depth > 0.16" for 100-Year event
Inflow = 0.0 cfs @ 13.84 hrs, Volume= 0.013 af
Outflow = 0.0 cfs @ 13.84 hrs, Volume= 0.013 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach DP-C: Flow to F-Series From Intermittent Stream

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 14.800 ac, 1.59% Impervious, Inflow Depth > 0.35" for 100-Year event
Inflow = 1.7 cfs @ 12.62 hrs, Volume= 0.432 af
Outflow = 1.7 cfs @ 12.62 hrs, Volume= 0.432 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach DP-D: Flow to VP at Northern corner/G-Series

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 6.478 ac, 0.00% Impervious, Inflow Depth > 0.16" for 100-Year event
Inflow = 0.2 cfs @ 14.15 hrs, Volume= 0.085 af
Outflow = 0.2 cfs @ 14.15 hrs, Volume= 0.085 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach DP-E: Flow to Central VP/C-Series

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 16.609 ac, 1.94% Impervious, Inflow Depth > 0.72" for 100-Year event
Inflow = 6.3 cfs @ 12.49 hrs, Volume= 0.997 af
Outflow = 6.3 cfs @ 12.49 hrs, Volume= 0.997 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach DP-F: Flow offsite to Eastern property line

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 2.032 ac, 0.00% Impervious, Inflow Depth > 0.16" for 100-Year event
Inflow = 0.1 cfs @ 13.89 hrs, Volume= 0.027 af
Outflow = 0.1 cfs @ 13.89 hrs, Volume= 0.027 af, Atten= 0%, Lag= 0.0 min

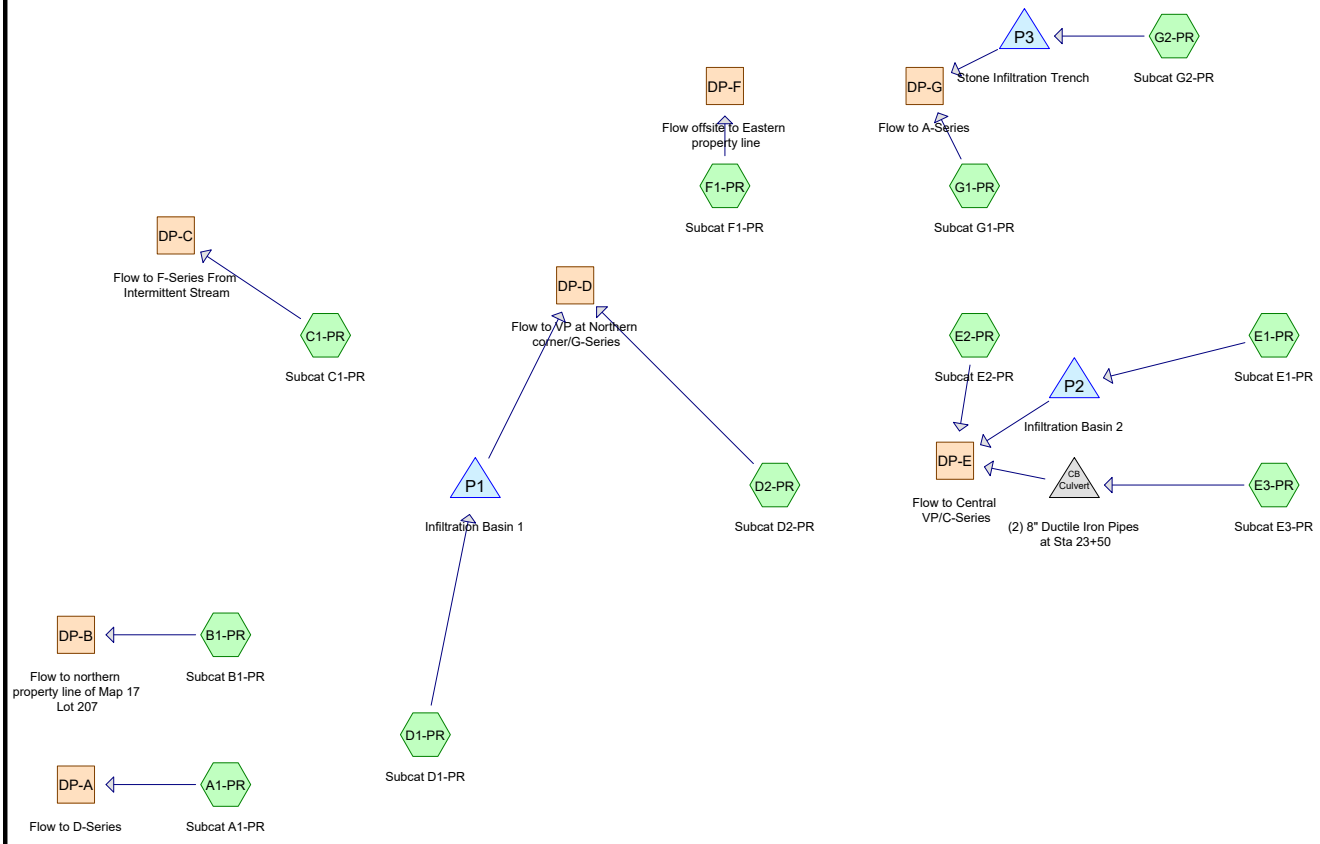
Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach DP-G: Flow to A-Series

[40] Hint: Not Described (Outflow=Inflow)

Inflow Area = 3.049 ac, 0.00% Impervious, Inflow Depth > 1.84" for 100-Year event
Inflow = 5.9 cfs @ 12.14 hrs, Volume= 0.468 af
Outflow = 5.9 cfs @ 12.14 hrs, Volume= 0.468 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs



Subcat Reach Pond Link

Routing Diagram for 315-430 HydroCAD Post
Prepared by CEC Inc, Printed 2/17/2025
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Rainfall Events Listing

Event#	Event Name	Storm Type	Curve	Mode	Duration (hours)	B/B	Depth (inches)	AMC
1	2-Year	Type III 24-hr		Default	24.00	1	3.40	2
2	10-Year	Type III 24-hr		Default	24.00	1	4.80	2
3	25-Year	Type III 24-hr		Default	24.00	1	5.60	2
4	100-Year	Type III 24-hr		Default	24.00	1	7.00	2

Area Listing (all nodes)

Area (acres)	CN	Description (subcatchment-numbers)
0.246	98	12 driveways @ 950 s.f (D1-PR)
0.294	98	13 half roof areas (D1-PR)
0.413	98	14 driveways @ 800 s.f & 2 @ 1000 s.f (E1-PR)
0.711	49	50-75% Grass cover, Fair, HSG A (E1-PR)
12.495	39	>75% Grass cover, Good, HSG A (B1-PR, D1-PR, D2-PR, E1-PR, E2-PR, E3-PR, F1-PR, G1-PR)
3.454	39	Ex. >75% Grass cover, Good, HSG A (C1-PR)
0.268	98	Ex. Unconnected roofs, HSG A (C1-PR, D1-PR)
1.045	30	Ex. Woods, Good, HSG A (C1-PR)
0.555	39	Ex.>75% Grass cover, Good, HSG A (C1-PR, D1-PR)
2.379	74	Fallow, crop residue, Good, HSG A (E1-PR, G1-PR, G2-PR)
0.195	96	Gravel surface, HSG A (C1-PR, E2-PR)
0.029	98	Lot 16 driveway (G1-PR)
0.253	98	Massasoit Road (E3-PR)
1.463	39	NEW>75% Grass cover, Good, HSG A (C1-PR)
2.591	98	Roadway/sidewalk (D1-PR, E1-PR)
0.615	98	Roofs, HSG A (B1-PR, D2-PR, E1-PR, E2-PR, E3-PR, F1-PR)
0.176	98	Unconnected roofs, HSG A (C1-PR, G1-PR)
0.645	98	Water Surface, HSG A (D1-PR, E1-PR)
17.591	30	Woods, Good, HSG A (A1-PR, B1-PR, C1-PR, D2-PR, E2-PR, E3-PR, F1-PR, G1-PR, G2-PR)
0.029	98	driveway area (F1-PR)
0.069	98	ex. Unconnected roofs, HSG A (E3-PR)
0.246	30	ex. Woods, Good, HSG A (D1-PR, D2-PR)
1.596	39	ex.>75% Grass cover, Good, HSG A (E3-PR)
47.356	**45**	**TOTAL AREA**

Soil Listing (all nodes)

Area (acres)	Soil Group	Subcatchment Numbers
43.501	HSG A	A1-PR, B1-PR, C1-PR, D1-PR, D2-PR, E1-PR, E2-PR, E3-PR, F1-PR, G1-PR, G2-PR
0.000	HSG B	
0.000	HSG C	
0.000	HSG D	
3.855	Other	D1-PR, E1-PR, E3-PR, F1-PR, G1-PR
47.356		**TOTAL AREA**

Summary for Subcatchment A1-PR: Subcat A1-PR

Runoff = 0.0 cfs @ 5.00 hrs, Volume= 0.000 af, Depth= 0.00"
Routed to Reach DP-A : Flow to D-Series

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.40"

Area (sf)	CN	Description
45,515	30	Woods, Good, HSG A
45,515		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.3	50	0.0140	0.05		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.78"
0.1	15	0.0320	2.88		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
15.4	65	Total			

Summary for Subcatchment B1-PR: Subcat B1-PR

Runoff = 0.0 cfs @ 5.00 hrs, Volume= 0.000 af, Depth= 0.00"
Routed to Reach DP-B : Flow to northern property line of Map 17 Lot 207

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.40"

Area (sf)	CN	Description
40,960	30	Woods, Good, HSG A
9,350	39	>75% Grass cover, Good, HSG A
1,800	98	Roofs, HSG A
52,110	34	Weighted Average
50,310		96.55% Pervious Area
1,800		3.45% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.6	50	0.0350	0.08		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.78"
1.0	175	0.0300	2.79		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
11.6	225	Total			

Summary for Subcatchment C1-PR: Subcat C1-PR

Runoff = 0.0 cfs @ 5.00 hrs, Volume= 0.000 af, Depth= 0.00"
Routed to Reach DP-C : Flow to F-Series From Intermittent Stream

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.40"

	Area (sf)	CN	Adj	Description
*	12,830	39		Ex.>75% Grass cover, Good, HSG A
	4,625	96		Gravel surface, HSG A
*	319,140	30		Woods, Good, HSG A
*	63,750	39		NEW>75% Grass cover, Good, HSG A
	6,750	98		Unconnected roofs, HSG A
*	45,500	30		Ex. Woods, Good, HSG A
*	150,450	39		Ex. >75% Grass cover, Good, HSG A
*	10,220	98		Ex. Unconnected roofs, HSG A
	613,265	36	35	Weighted Average, UI Adjusted
	596,295			97.23% Pervious Area
	16,970			2.77% Impervious Area
	16,970			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.4	50	0.0060	0.04		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.78"
0.4	80	0.0550	3.78		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
21.8	130	Total			

Summary for Subcatchment D1-PR: Subcat D1-PR

Runoff = 2.1 cfs @ 12.26 hrs, Volume= 0.239 af, Depth> 0.46"
Routed to Pond P1 : Infiltration Basin 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.40"

	Area (sf)	CN	Description
*	60,200	98	Roadway/sidewalk
*	10,725	98	12 driveways @ 950 s.f
*	12,800	98	13 half roof areas
	156,167	39	>75% Grass cover, Good, HSG A
	14,790	98	Water Surface, HSG A
*	2,900	30	ex. Woods, Good, HSG A
*	11,355	39	Ex.>75% Grass cover, Good, HSG A
*	1,450	98	Ex. Unconnected roofs, HSG A
	270,387	61	Weighted Average
	170,422		63.03% Pervious Area
	99,965		36.97% Impervious Area
	1,450		1.45% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.2	50	0.0500	0.20		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.78"
9.4	1,150	0.0100	2.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
13.6	1,200	Total			

Summary for Subcatchment D2-PR: Subcat D2-PR

Runoff = 0.0 cfs @ 5.00 hrs, Volume= 0.000 af, Depth= 0.00"
Routed to Reach DP-D : Flow to VP at Northern corner/G-Series

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.40"

	Area (sf)	CN	Description
	100,680	30	Woods, Good, HSG A
	26,795	39	>75% Grass cover, Good, HSG A
	900	98	Roofs, HSG A
*	7,800	30	ex. Woods, Good, HSG A
	136,175	32	Weighted Average
	135,275		99.34% Pervious Area
	900		0.66% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.8	50	0.0180	0.06		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.78"
0.5	70	0.0200	2.28		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
14.3	120	Total			

Summary for Subcatchment E1-PR: Subcat E1-PR

Runoff = 2.5 cfs @ 12.20 hrs, Volume= 0.279 af, Depth> 0.43"
Routed to Pond P2 : Infiltration Basin 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.40"

	Area (sf)	CN	Description
*	52,685	98	Roadway/sidewalk
*	18,000	98	14 driveways @ 800 s.f & 2 @ 1000 s.f
	15,500	98	Roofs, HSG A
	30,960	49	50-75% Grass cover, Fair, HSG A
	178,845	39	>75% Grass cover, Good, HSG A
	13,309	98	Water Surface, HSG A
	32,300	74	Fallow, crop residue, Good, HSG A
	341,599	60	Weighted Average
	242,105		70.87% Pervious Area
	99,494		29.13% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.4	50	0.0260	0.15		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.78"
4.1	400	0.0100	1.61		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.4	110	0.0100	4.91	3.86	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012 Corrugated PP, smooth interior
9.9	560	Total			

Summary for Subcatchment E2-PR: Subcat E2-PR

Runoff = 0.0 cfs @ 5.00 hrs, Volume= 0.000 af, Depth= 0.00"
Routed to Reach DP-E : Flow to Central VP/C-Series

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.40"

	Area (sf)	CN	Description
	148,558	30	Woods, Good, HSG A
	3,852	96	Gravel surface, HSG A
	94,590	39	>75% Grass cover, Good, HSG A
	5,000	98	Roofs, HSG A
	252,000	36	Weighted Average
	247,000		98.02% Pervious Area
	5,000		1.98% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.2	50	0.0120	0.05		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.78"
2.8	340	0.0160	2.04		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
19.0	390	Total			

Summary for Subcatchment E3-PR: Subcat E3-PR

Runoff = 0.0 cfs @ 15.32 hrs, Volume= 0.011 af, Depth> 0.04"
Routed to Pond Culvert : (2) 8" Ductile Iron Pipes at Sta 23+50

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.40"

	Area (sf)	CN	Description
	54,235	39	>75% Grass cover, Good, HSG A
	15,030	30	Woods, Good, HSG A
	1,800	98	Roofs, HSG A
*	11,000	98	Massasoit Road
*	69,500	39	ex.>75% Grass cover, Good, HSG A
*	3,000	98	ex. Unconnected roofs, HSG A
	154,565	44	Weighted Average
	138,765		89.78% Pervious Area
	15,800		10.22% Impervious Area
	3,000		18.99% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.7	50	0.0220	0.07		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.78"
2.2	280	0.0170	2.10		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
14.9	330	Total			

Summary for Subcatchment F1-PR: Subcat F1-PR

Runoff = 0.0 cfs @ 5.00 hrs, Volume= 0.000 af, Depth= 0.00"
Routed to Reach DP-F : Flow offsite to Eastern property line

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.40"

	Area (sf)	CN	Description
	39,320	30	Woods, Good, HSG A
	13,460	39	>75% Grass cover, Good, HSG A
	1,800	98	Roofs, HSG A
*	1,260	98	driveway area
	55,840	36	Weighted Average
	52,780		94.52% Pervious Area
	3,060		5.48% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.9	50	0.0260	0.07		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.78"
1.4	220	0.0260	2.60		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
13.3	270	Total			

Summary for Subcatchment G1-PR: Subcat G1-PR

Runoff = 0.2 cfs @ 12.42 hrs, Volume= 0.045 af, Depth> 0.19"
Routed to Reach DP-G : Flow to A-Series

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.40"

	Area (sf)	CN	Adj	Description
	54,075	30		Woods, Good, HSG A
	10,830	39		>75% Grass cover, Good, HSG A
	900	98		Unconnected roofs, HSG A
*	1,260	98		Lot 16 driveway
	59,010	74		Fallow, crop residue, Good, HSG A
	126,075	53	52	Weighted Average, UI Adjusted
	123,915			98.29% Pervious Area
	2,160			1.71% Impervious Area
	900			41.67% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.3	50	0.0020	0.11		**Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.78"
1.7	420	0.0640	4.07		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
9.0	470	Total			

Summary for Subcatchment G2-PR: Subcat G2-PR

Runoff = 0.2 cfs @ 12.11 hrs, Volume= 0.018 af, Depth> 0.63"
Routed to Pond P3 : Stone Infiltration Trench

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 2-Year Rainfall=3.40"

Area (sf)	CN	Description
12,300	74	Fallow, crop residue, Good, HSG A
3,000	30	Woods, Good, HSG A
15,300	65	Weighted Average
15,300		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Reach DP-A: Flow to D-Series

Inflow Area = 1.045 ac, 0.00% Impervious, Inflow Depth = 0.00" for 2-Year event
Inflow = 0.0 cfs @ 5.00 hrs, Volume= 0.000 af
Outflow = 0.0 cfs @ 5.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach DP-B: Flow to northern property line of Map 17 Lot 207

Inflow Area = 1.196 ac, 3.45% Impervious, Inflow Depth = 0.00" for 2-Year event
Inflow = 0.0 cfs @ 5.00 hrs, Volume= 0.000 af
Outflow = 0.0 cfs @ 5.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach DP-C: Flow to F-Series From Intermittent Stream

Inflow Area = 14.079 ac, 2.77% Impervious, Inflow Depth = 0.00" for 2-Year event
Inflow = 0.0 cfs @ 5.00 hrs, Volume= 0.000 af
Outflow = 0.0 cfs @ 5.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach DP-D: Flow to VP at Northern corner/G-Series

Inflow Area = 9.333 ac, 24.81% Impervious, Inflow Depth = 0.00" for 2-Year event
Inflow = 0.0 cfs @ 5.00 hrs, Volume= 0.000 af
Outflow = 0.0 cfs @ 5.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach DP-E: Flow to Central VP/C-Series

Inflow Area = 17.175 ac, 16.08% Impervious, Inflow Depth > 0.01" for 2-Year event
Inflow = 0.0 cfs @ 15.32 hrs, Volume= 0.011 af
Outflow = 0.0 cfs @ 15.32 hrs, Volume= 0.011 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach DP-F: Flow offsite to Eastern property line

Inflow Area = 1.282 ac, 5.48% Impervious, Inflow Depth = 0.00" for 2-Year event
Inflow = 0.0 cfs @ 5.00 hrs, Volume= 0.000 af
Outflow = 0.0 cfs @ 5.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach DP-G: Flow to A-Series

Inflow Area = 3.246 ac, 1.53% Impervious, Inflow Depth > 0.16" for 2-Year event
Inflow = 0.2 cfs @ 12.42 hrs, Volume= 0.045 af
Outflow = 0.2 cfs @ 12.42 hrs, Volume= 0.045 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Pond Culvert: (2) 8" Ductile Iron Pipes at Sta 23+50

Inflow Area = 3.548 ac, 10.22% Impervious, Inflow Depth > 0.04" for 2-Year event
Inflow = 0.0 cfs @ 15.32 hrs, Volume= 0.011 af
Outflow = 0.0 cfs @ 15.32 hrs, Volume= 0.011 af, Atten= 0%, Lag= 0.0 min
Primary = 0.0 cfs @ 15.32 hrs, Volume= 0.011 af
Routed to Reach DP-E : Flow to Central VP/C-Series

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 44.19' @ 15.32 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	44.11'	**8.0" Round Culvert X 2.00** L= 70.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 44.11' / 43.82' S= 0.0041 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 0.35 sf

Primary OutFlow Max=0.0 cfs @ 15.32 hrs HW=44.19' (Free Discharge)
↑—**1=Culvert** (Barrel Controls 0.0 cfs @ 0.87 fps)

Summary for Pond P1: Infiltration Basin 1

Inflow Area = 6.207 ac, 36.97% Impervious, Inflow Depth > 0.46" for 2-Year event
Inflow = 2.1 cfs @ 12.26 hrs, Volume= 0.239 af
Outflow = 0.8 cfs @ 12.71 hrs, Volume= 0.238 af, Atten= 59%, Lag= 27.5 min
Discarded = 0.8 cfs @ 12.71 hrs, Volume= 0.238 af
Primary = 0.0 cfs @ 5.00 hrs, Volume= 0.000 af
Routed to Reach DP-D : Flow to VP at Northern corner/G-Series

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 41.12' @ 12.71 hrs Surf.Area= 15,153 sf Storage= 1,831 cf

Plug-Flow detention time= 17.1 min calculated for 0.237 af (99% of inflow)
Center-of-Mass det. time= 15.0 min (871.8 - 856.8)

Volume	Invert	Avail.Storage	Storage Description
#1	41.00'	55,414 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
41.00	14,960	530.0	0	0	14,960
42.00	16,580	550.0	15,763	15,763	16,762
43.00	20,250	645.0	18,384	34,148	25,815
44.00	22,300	650.0	21,267	55,414	26,643

Device	Routing	Invert	Outlet Devices
#1	Discarded	41.00'	**2.410 in/hr Exfiltration over Surface area**
#2	Primary	43.00'	**30.0' long x 15.0' breadth Broad-Crested Rectangular Weir**
			Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60
			Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Discarded OutFlow Max=0.8 cfs @ 12.71 hrs HW=41.12' (Free Discharge)
↑—**1=Exfiltration** (Exfiltration Controls 0.8 cfs)

Primary OutFlow Max=0.0 cfs @ 5.00 hrs HW=41.00' (Free Discharge)
↑—**2=Broad-Crested Rectangular Weir** (Controls 0.0 cfs)

Summary for Pond P2: Infiltration Basin 2

Inflow Area = 7.842 ac, 29.13% Impervious, Inflow Depth > 0.43" for 2-Year event
Inflow = 2.5 cfs @ 12.20 hrs, Volume= 0.279 af
Outflow = 0.7 cfs @ 12.96 hrs, Volume= 0.277 af, Atten= 73%, Lag= 45.8 min
Discarded = 0.7 cfs @ 12.96 hrs, Volume= 0.277 af
Primary = 0.0 cfs @ 5.00 hrs, Volume= 0.000 af
Routed to Reach DP-E : Flow to Central VP/C-Series

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 36.24' @ 12.96 hrs Surf.Area= 12,003 sf Storage= 2,787 cf

Plug-Flow detention time= 37.1 min calculated for 0.277 af (99% of inflow)
Center-of-Mass det. time= 35.0 min (892.9 - 857.9)

Volume	Invert	Avail.Storage	Storage Description
#1	36.00'	43,540 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
36.00	11,550	460.0	0	0	11,550
38.00	15,650	510.0	27,096	27,096	15,530
39.00	17,250	535.0	16,444	43,540	17,673

Device	Routing	Invert	Outlet Devices
#1	Discarded	36.00'	**2.410 in/hr Exfiltration over Surface area**
#2	Primary	38.00'	**16.0' long x 15.0' breadth Broad-Crested Rectangular Weir**
			Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60
			Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

#3	Primary	37.50'	**4.0' long x 0.50' rise Sharp-Crested Rectangular Weir** 2 End Contraction(s) 1.5' Crest Height

Discarded OutFlow Max=0.7 cfs @ 12.96 hrs HW=36.24' (Free Discharge)
└**1=Exfiltration** (Exfiltration Controls 0.7 cfs)

Primary OutFlow Max=0.0 cfs @ 5.00 hrs HW=36.00' (Free Discharge)
├**2=Broad-Crested Rectangular Weir** (Controls 0.0 cfs)
└**3=Sharp-Crested Rectangular Weir** (Controls 0.0 cfs)

Summary for Pond P3: Stone Infiltration Trench

Inflow Area = 0.351 ac, 0.00% Impervious, Inflow Depth > 0.63" for 2-Year event
Inflow = 0.2 cfs @ 12.11 hrs, Volume= 0.018 af
Outflow = 0.0 cfs @ 11.95 hrs, Volume= 0.017 af, Atten= 89%, Lag= 0.0 min
Discarded = 0.0 cfs @ 11.95 hrs, Volume= 0.017 af
Primary = 0.0 cfs @ 5.00 hrs, Volume= 0.000 af
Routed to Reach DP-G : Flow to A-Series

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 50.76' @ 14.15 hrs Surf.Area= 0.010 ac Storage= 0.007 af

Plug-Flow detention time= 146.8 min calculated for 0.017 af (91% of inflow)
Center-of-Mass det. time= 117.3 min (955.8 - 838.5)

Volume	Invert	Avail.Storage	Storage Description
#1	49.00'	0.012 af	**4.00'W x 110.00'L x 3.00'H Prismatoid** 0.030 af Overall x 40.0% Voids

Device	Routing	Invert	Outlet Devices
#0	Primary	52.00'	**Automatic Storage Overflow** (Discharged without head)
#1	Discarded	49.00'	**2.410 in/hr Exfiltration over Surface area**
#2	Primary	51.99'	**110.0' long x 4.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32

Discarded OutFlow Max=0.0 cfs @ 11.95 hrs HW=49.05' (Free Discharge)
└**1=Exfiltration** (Exfiltration Controls 0.0 cfs)

Primary OutFlow Max=0.0 cfs @ 5.00 hrs HW=49.00' (Free Discharge)
└**2=Broad-Crested Rectangular Weir** (Controls 0.0 cfs)

Summary for Subcatchment A1-PR: Subcat A1-PR

Runoff = 0.0 cfs @ 5.00 hrs, Volume= 0.000 af, Depth= 0.00"
Routed to Reach DP-A : Flow to D-Series

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.80"

Area (sf)	CN	Description
45,515	30	Woods, Good, HSG A
45,515		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.3	50	0.0140	0.05		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.78"
0.1	15	0.0320	2.88		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
15.4	65	Total			

Summary for Subcatchment B1-PR: Subcat B1-PR

Runoff = 0.0 cfs @ 16.93 hrs, Volume= 0.002 af, Depth> 0.02"
Routed to Reach DP-B : Flow to northern property line of Map 17 Lot 207

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.80"

Area (sf)	CN	Description
40,960	30	Woods, Good, HSG A
9,350	39	>75% Grass cover, Good, HSG A
1,800	98	Roofs, HSG A
52,110	34	Weighted Average
50,310		96.55% Pervious Area
1,800		3.45% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.6	50	0.0350	0.08		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.78"
1.0	175	0.0300	2.79		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
11.6	225	Total			

Summary for Subcatchment C1-PR: Subcat C1-PR

Runoff = 0.1 cfs @ 15.70 hrs, Volume= 0.045 af, Depth> 0.04"
Routed to Reach DP-C : Flow to F-Series From Intermittent Stream

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.80"

	Area (sf)	CN	Adj	Description
*	12,830	39		Ex.>75% Grass cover, Good, HSG A
	4,625	96		Gravel surface, HSG A
*	319,140	30		Woods, Good, HSG A
*	63,750	39		NEW>75% Grass cover, Good, HSG A
	6,750	98		Unconnected roofs, HSG A
*	45,500	30		Ex. Woods, Good, HSG A
*	150,450	39		Ex. >75% Grass cover, Good, HSG A
*	10,220	98		Ex. Unconnected roofs, HSG A
	613,265	36	35	Weighted Average, UI Adjusted
	596,295			97.23% Pervious Area
	16,970			2.77% Impervious Area
	16,970			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.4	50	0.0060	0.04		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.78"
0.4	80	0.0550	3.78		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
21.8	130	Total			

Summary for Subcatchment D1-PR: Subcat D1-PR

Runoff = 6.3 cfs @ 12.21 hrs, Volume= 0.582 af, Depth> 1.13"
Routed to Pond P1 : Infiltration Basin 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.80"

	Area (sf)	CN	Description
*	60,200	98	Roadway/sidewalk
*	10,725	98	12 driveways @ 950 s.f
*	12,800	98	13 half roof areas
	156,167	39	>75% Grass cover, Good, HSG A
	14,790	98	Water Surface, HSG A
*	2,900	30	ex. Woods, Good, HSG A
*	11,355	39	Ex.>75% Grass cover, Good, HSG A
*	1,450	98	Ex. Unconnected roofs, HSG A
	270,387	61	Weighted Average
	170,422		63.03% Pervious Area
	99,965		36.97% Impervious Area
	1,450		1.45% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.2	50	0.0500	0.20		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.78"
9.4	1,150	0.0100	2.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
13.6	1,200	Total			

Summary for Subcatchment D2-PR: Subcat D2-PR

Runoff = 0.0 cfs @ 20.00 hrs, Volume= 0.001 af, Depth> 0.01"
Routed to Reach DP-D : Flow to VP at Northern corner/G-Series

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.80"

	Area (sf)	CN	Description
	100,680	30	Woods, Good, HSG A
	26,795	39	>75% Grass cover, Good, HSG A
	900	98	Roofs, HSG A
*	7,800	30	ex. Woods, Good, HSG A
	136,175	32	Weighted Average
	135,275		99.34% Pervious Area
	900		0.66% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.8	50	0.0180	0.06		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.78"
0.5	70	0.0200	2.28		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
14.3	120	Total			

Summary for Subcatchment E1-PR: Subcat E1-PR

Runoff = 8.3 cfs @ 12.16 hrs, Volume= 0.697 af, Depth> 1.07"
Routed to Pond P2 : Infiltration Basin 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.80"

	Area (sf)	CN	Description
*	52,685	98	Roadway/sidewalk
*	18,000	98	14 driveways @ 800 s.f & 2 @ 1000 s.f
	15,500	98	Roofs, HSG A
	30,960	49	50-75% Grass cover, Fair, HSG A
	178,845	39	>75% Grass cover, Good, HSG A
	13,309	98	Water Surface, HSG A
	32,300	74	Fallow, crop residue, Good, HSG A
	341,599	60	Weighted Average
	242,105		70.87% Pervious Area
	99,494		29.13% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.4	50	0.0260	0.15		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.78"
4.1	400	0.0100	1.61		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.4	110	0.0100	4.91	3.86	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012 Corrugated PP, smooth interior
9.9	560	Total			

Summary for Subcatchment E2-PR: Subcat E2-PR

Runoff = 0.1 cfs @ 15.33 hrs, Volume= 0.027 af, Depth> 0.06"
Routed to Reach DP-E : Flow to Central VP/C-Series

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.80"

Area (sf)	CN	Description
148,558	30	Woods, Good, HSG A
3,852	96	Gravel surface, HSG A
94,590	39	>75% Grass cover, Good, HSG A
5,000	98	Roofs, HSG A
252,000	36	Weighted Average
247,000		98.02% Pervious Area
5,000		1.98% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.2	50	0.0120	0.05		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.78"
2.8	340	0.0160	2.04		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
19.0	390	Total			

Summary for Subcatchment E3-PR: Subcat E3-PR

Runoff = 0.4 cfs @ 12.49 hrs, Volume= 0.083 af, Depth> 0.28"
Routed to Pond Culvert : (2) 8" Ductile Iron Pipes at Sta 23+50

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.80"

	Area (sf)	CN	Description
	54,235	39	>75% Grass cover, Good, HSG A
	15,030	30	Woods, Good, HSG A
	1,800	98	Roofs, HSG A
*	11,000	98	Massasoit Road
*	69,500	39	ex.>75% Grass cover, Good, HSG A
*	3,000	98	ex. Unconnected roofs, HSG A
	154,565	44	Weighted Average
	138,765		89.78% Pervious Area
	15,800		10.22% Impervious Area
	3,000		18.99% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.7	50	0.0220	0.07		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.78"
2.2	280	0.0170	2.10		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
14.9	330	Total			

Summary for Subcatchment F1-PR: Subcat F1-PR

Runoff = 0.0 cfs @ 15.24 hrs, Volume= 0.006 af, Depth> 0.06"
Routed to Reach DP-F : Flow offsite to Eastern property line

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.80"

	Area (sf)	CN	Description
	39,320	30	Woods, Good, HSG A
	13,460	39	>75% Grass cover, Good, HSG A
	1,800	98	Roofs, HSG A
*	1,260	98	driveway area
	55,840	36	Weighted Average
	52,780		94.52% Pervious Area
	3,060		5.48% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.9	50	0.0260	0.07		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.78"
1.4	220	0.0260	2.60		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
13.3	270	Total			

Summary for Subcatchment G1-PR: Subcat G1-PR

Runoff = 1.4 cfs @ 12.17 hrs, Volume= 0.151 af, Depth> 0.63"
Routed to Reach DP-G : Flow to A-Series

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.80"

	Area (sf)	CN	Adj	Description
	54,075	30		Woods, Good, HSG A
	10,830	39		>75% Grass cover, Good, HSG A
	900	98		Unconnected roofs, HSG A
*	1,260	98		Lot 16 driveway
	59,010	74		Fallow, crop residue, Good, HSG A
	126,075	53	52	Weighted Average, UI Adjusted
	123,915			98.29% Pervious Area
	2,160			1.71% Impervious Area
	900			41.67% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.3	50	0.0020	0.11		**Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.78"
1.7	420	0.0640	4.07		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
9.0	470	Total			

Summary for Subcatchment G2-PR: Subcat G2-PR

Runoff = 0.6 cfs @ 12.10 hrs, Volume= 0.041 af, Depth> 1.39"
Routed to Pond P3 : Stone Infiltration Trench

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 10-Year Rainfall=4.80"

Area (sf)	CN	Description
12,300	74	Fallow, crop residue, Good, HSG A
3,000	30	Woods, Good, HSG A
15,300	65	Weighted Average
15,300		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Reach DP-A: Flow to D-Series

Inflow Area = 1.045 ac, 0.00% Impervious, Inflow Depth = 0.00" for 10-Year event
Inflow = 0.0 cfs @ 5.00 hrs, Volume= 0.000 af
Outflow = 0.0 cfs @ 5.00 hrs, Volume= 0.000 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach DP-B: Flow to northern property line of Map 17 Lot 207

Inflow Area = 1.196 ac, 3.45% Impervious, Inflow Depth > 0.02" for 10-Year event
Inflow = 0.0 cfs @ 16.93 hrs, Volume= 0.002 af
Outflow = 0.0 cfs @ 16.93 hrs, Volume= 0.002 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach DP-C: Flow to F-Series From Intermittent Stream

Inflow Area = 14.079 ac, 2.77% Impervious, Inflow Depth > 0.04" for 10-Year event
Inflow = 0.1 cfs @ 15.70 hrs, Volume= 0.045 af
Outflow = 0.1 cfs @ 15.70 hrs, Volume= 0.045 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach DP-D: Flow to VP at Northern corner/G-Series

Inflow Area = 9.333 ac, 24.81% Impervious, Inflow Depth > 0.00" for 10-Year event
Inflow = 0.0 cfs @ 20.00 hrs, Volume= 0.001 af
Outflow = 0.0 cfs @ 20.00 hrs, Volume= 0.001 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach DP-E: Flow to Central VP/C-Series

Inflow Area = 17.175 ac, 16.08% Impervious, Inflow Depth > 0.08" for 10-Year event
Inflow = 0.4 cfs @ 12.49 hrs, Volume= 0.110 af
Outflow = 0.4 cfs @ 12.49 hrs, Volume= 0.110 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach DP-F: Flow offsite to Eastern property line

Inflow Area = 1.282 ac, 5.48% Impervious, Inflow Depth > 0.06" for 10-Year event
Inflow = 0.0 cfs @ 15.24 hrs, Volume= 0.006 af
Outflow = 0.0 cfs @ 15.24 hrs, Volume= 0.006 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach DP-G: Flow to A-Series

Inflow Area = 3.246 ac, 1.53% Impervious, Inflow Depth > 0.61" for 10-Year event
Inflow = 1.6 cfs @ 12.31 hrs, Volume= 0.164 af
Outflow = 1.6 cfs @ 12.31 hrs, Volume= 0.164 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Pond Culvert: (2) 8" Ductile Iron Pipes at Sta 23+50

Inflow Area = 3.548 ac, 10.22% Impervious, Inflow Depth > 0.28" for 10-Year event
Inflow = 0.4 cfs @ 12.49 hrs, Volume= 0.083 af
Outflow = 0.4 cfs @ 12.49 hrs, Volume= 0.083 af, Atten= 0%, Lag= 0.0 min
Primary = 0.4 cfs @ 12.49 hrs, Volume= 0.083 af
Routed to Reach DP-E : Flow to Central VP/C-Series

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 44.42' @ 12.49 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	44.11'	**8.0" Round Culvert X 2.00** L= 70.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 44.11' / 43.82' S= 0.0041 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 0.35 sf

Primary OutFlow Max=0.4 cfs @ 12.49 hrs HW=44.42' (Free Discharge)
↑**1=Culvert** (Barrel Controls 0.4 cfs @ 1.91 fps)

Summary for Pond P1: Infiltration Basin 1

Inflow Area = 6.207 ac, 36.97% Impervious, Inflow Depth > 1.13" for 10-Year event
Inflow = 6.3 cfs @ 12.21 hrs, Volume= 0.582 af
Outflow = 0.9 cfs @ 13.68 hrs, Volume= 0.578 af, Atten= 86%, Lag= 87.7 min
Discarded = 0.9 cfs @ 13.68 hrs, Volume= 0.578 af
Primary = 0.0 cfs @ 5.00 hrs, Volume= 0.000 af
Routed to Reach DP-D : Flow to VP at Northern corner/G-Series

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 41.63' @ 13.68 hrs Surf.Area= 15,973 sf Storage= 9,765 cf

Plug-Flow detention time= 119.1 min calculated for 0.576 af (99% of inflow)
Center-of-Mass det. time= 116.5 min (950.3 - 833.8)

Volume	Invert	Avail.Storage	Storage Description
#1	41.00'	55,414 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
41.00	14,960	530.0	0	0	14,960
42.00	16,580	550.0	15,763	15,763	16,762
43.00	20,250	645.0	18,384	34,148	25,815
44.00	22,300	650.0	21,267	55,414	26,643

Device	Routing	Invert	Outlet Devices
#1	Discarded	41.00'	**2.410 in/hr Exfiltration over Surface area**
#2	Primary	43.00'	**30.0' long x 15.0' breadth Broad-Crested Rectangular Weir**
			Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60
			Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Discarded OutFlow Max=0.9 cfs @ 13.68 hrs HW=41.63' (Free Discharge)
↑—**1=Exfiltration** (Exfiltration Controls 0.9 cfs)

Primary OutFlow Max=0.0 cfs @ 5.00 hrs HW=41.00' (Free Discharge)
↑—**2=Broad-Crested Rectangular Weir** (Controls 0.0 cfs)

Summary for Pond P2: Infiltration Basin 2

Inflow Area = 7.842 ac, 29.13% Impervious, Inflow Depth > 1.07" for 10-Year event
Inflow = 8.3 cfs @ 12.16 hrs, Volume= 0.697 af
Outflow = 0.8 cfs @ 14.86 hrs, Volume= 0.508 af, Atten= 91%, Lag= 161.8 min
Discarded = 0.8 cfs @ 14.86 hrs, Volume= 0.508 af
Primary = 0.0 cfs @ 5.00 hrs, Volume= 0.000 af
Routed to Reach DP-E : Flow to Central VP/C-Series

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 37.12' @ 14.86 hrs Surf.Area= 13,761 sf Storage= 14,108 cf

Plug-Flow detention time= 188.4 min calculated for 0.506 af (73% of inflow)
Center-of-Mass det. time= 121.1 min (954.4 - 833.3)

Volume	Invert	Avail.Storage	Storage Description
#1	36.00'	43,540 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
36.00	11,550	460.0	0	0	11,550
38.00	15,650	510.0	27,096	27,096	15,530
39.00	17,250	535.0	16,444	43,540	17,673

Device	Routing	Invert	Outlet Devices
#1	Discarded	36.00'	**2.410 in/hr Exfiltration over Surface area**
#2	Primary	38.00'	**16.0' long x 15.0' breadth Broad-Crested Rectangular Weir**
			Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60
			Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

#3	Primary	37.50'	**4.0' long x 0.50' rise Sharp-Crested Rectangular Weir** 2 End Contraction(s) 1.5' Crest Height

Discarded OutFlow Max=0.8 cfs @ 14.86 hrs HW=37.12' (Free Discharge)
└**1=Exfiltration** (Exfiltration Controls 0.8 cfs)

Primary OutFlow Max=0.0 cfs @ 5.00 hrs HW=36.00' (Free Discharge)
├**2=Broad-Crested Rectangular Weir** (Controls 0.0 cfs)
└**3=Sharp-Crested Rectangular Weir** (Controls 0.0 cfs)

Summary for Pond P3: Stone Infiltration Trench

Inflow Area = 0.351 ac, 0.00% Impervious, Inflow Depth > 1.39" for 10-Year event
Inflow = 0.6 cfs @ 12.10 hrs, Volume= 0.041 af
Outflow = 0.4 cfs @ 12.31 hrs, Volume= 0.030 af, Atten= 31%, Lag= 12.8 min
Discarded = 0.0 cfs @ 11.65 hrs, Volume= 0.018 af
Primary = 0.4 cfs @ 12.31 hrs, Volume= 0.013 af
Routed to Reach DP-G : Flow to A-Series

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 52.00' @ 12.30 hrs Surf.Area= 0.010 ac Storage= 0.012 af

Plug-Flow detention time= 121.0 min calculated for 0.030 af (75% of inflow)
Center-of-Mass det. time= 57.3 min (876.6 - 819.3)

Volume	Invert	Avail.Storage	Storage Description
#1	49.00'	0.012 af	**4.00'W x 110.00'L x 3.00'H Prismatoid** 0.030 af Overall x 40.0% Voids

Device	Routing	Invert	Outlet Devices
#0	Primary	52.00'	**Automatic Storage Overflow** (Discharged without head)
#1	Discarded	49.00'	**2.410 in/hr Exfiltration over Surface area**
#2	Primary	51.99'	**110.0' long x 4.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32

Discarded OutFlow Max=0.0 cfs @ 11.65 hrs HW=49.04' (Free Discharge)
└**1=Exfiltration** (Exfiltration Controls 0.0 cfs)

Primary OutFlow Max=0.3 cfs @ 12.31 hrs HW=52.00' (Free Discharge)
└**2=Broad-Crested Rectangular Weir** (Weir Controls 0.3 cfs @ 0.24 fps)

Summary for Subcatchment A1-PR: Subcat A1-PR

Runoff = 0.0 cfs @ 17.35 hrs, Volume= 0.002 af, Depth> 0.02"
Routed to Reach DP-A : Flow to D-Series

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.60"

Area (sf)	CN	Description
45,515	30	Woods, Good, HSG A
45,515		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.3	50	0.0140	0.05		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.78"
0.1	15	0.0320	2.88		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
15.4	65	Total			

Summary for Subcatchment B1-PR: Subcat B1-PR

Runoff = 0.0 cfs @ 14.78 hrs, Volume= 0.010 af, Depth> 0.10"
Routed to Reach DP-B : Flow to northern property line of Map 17 Lot 207

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.60"

Area (sf)	CN	Description
40,960	30	Woods, Good, HSG A
9,350	39	>75% Grass cover, Good, HSG A
1,800	98	Roofs, HSG A
52,110	34	Weighted Average
50,310		96.55% Pervious Area
1,800		3.45% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.6	50	0.0350	0.08		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.78"
1.0	175	0.0300	2.79		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
11.6	225	Total			

Summary for Subcatchment C1-PR: Subcat C1-PR

Runoff = 0.3 cfs @ 13.99 hrs, Volume= 0.153 af, Depth> 0.13"
Routed to Reach DP-C : Flow to F-Series From Intermittent Stream

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.60"

	Area (sf)	CN	Adj	Description
*	12,830	39		Ex.>75% Grass cover, Good, HSG A
	4,625	96		Gravel surface, HSG A
*	319,140	30		Woods, Good, HSG A
*	63,750	39		NEW>75% Grass cover, Good, HSG A
	6,750	98		Unconnected roofs, HSG A
*	45,500	30		Ex. Woods, Good, HSG A
*	150,450	39		Ex. >75% Grass cover, Good, HSG A
*	10,220	98		Ex. Unconnected roofs, HSG A
	613,265	36	35	Weighted Average, UI Adjusted
	596,295			97.23% Pervious Area
	16,970			2.77% Impervious Area
	16,970			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.4	50	0.0060	0.04		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.78"
0.4	80	0.0550	3.78		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
21.8	130	Total			

Summary for Subcatchment D1-PR: Subcat D1-PR

Runoff = 9.2 cfs @ 12.21 hrs, Volume= 0.818 af, Depth> 1.58"
Routed to Pond P1 : Infiltration Basin 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.60"

	Area (sf)	CN	Description
*	60,200	98	Roadway/sidewalk
*	10,725	98	12 driveways @ 950 s.f
*	12,800	98	13 half roof areas
	156,167	39	>75% Grass cover, Good, HSG A
	14,790	98	Water Surface, HSG A
*	2,900	30	ex. Woods, Good, HSG A
*	11,355	39	Ex.>75% Grass cover, Good, HSG A
*	1,450	98	Ex. Unconnected roofs, HSG A
	270,387	61	Weighted Average
	170,422		63.03% Pervious Area
	99,965		36.97% Impervious Area
	1,450		1.45% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.2	50	0.0500	0.20		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.78"
9.4	1,150	0.0100	2.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
13.6	1,200	Total			

Summary for Subcatchment D2-PR: Subcat D2-PR

Runoff = 0.0 cfs @ 15.44 hrs, Volume= 0.014 af, Depth> 0.05"
Routed to Reach DP-D : Flow to VP at Northern corner/G-Series

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.60"

	Area (sf)	CN	Description
	100,680	30	Woods, Good, HSG A
	26,795	39	>75% Grass cover, Good, HSG A
	900	98	Roofs, HSG A
*	7,800	30	ex. Woods, Good, HSG A
	136,175	32	Weighted Average
	135,275		99.34% Pervious Area
	900		0.66% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.8	50	0.0180	0.06		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.78"
0.5	70	0.0200	2.28		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
14.3	120	Total			

Summary for Subcatchment E1-PR: Subcat E1-PR

Runoff = 12.3 cfs @ 12.16 hrs, Volume= 0.987 af, Depth> 1.51"
Routed to Pond P2 : Infiltration Basin 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.60"

	Area (sf)	CN	Description
*	52,685	98	Roadway/sidewalk
*	18,000	98	14 driveways @ 800 s.f & 2 @ 1000 s.f
	15,500	98	Roofs, HSG A
	30,960	49	50-75% Grass cover, Fair, HSG A
	178,845	39	>75% Grass cover, Good, HSG A
	13,309	98	Water Surface, HSG A
	32,300	74	Fallow, crop residue, Good, HSG A
	341,599	60	Weighted Average
	242,105		70.87% Pervious Area
	99,494		29.13% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.4	50	0.0260	0.15		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.78"
4.1	400	0.0100	1.61		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.4	110	0.0100	4.91	3.86	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012 Corrugated PP, smooth interior
9.9	560	Total			

Summary for Subcatchment E2-PR: Subcat E2-PR

Runoff = 0.2 cfs @ 13.03 hrs, Volume= 0.078 af, Depth> 0.16"
Routed to Reach DP-E : Flow to Central VP/C-Series

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.60"

Area (sf)	CN	Description
148,558	30	Woods, Good, HSG A
3,852	96	Gravel surface, HSG A
94,590	39	>75% Grass cover, Good, HSG A
5,000	98	Roofs, HSG A
252,000	36	Weighted Average
247,000		98.02% Pervious Area
5,000		1.98% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.2	50	0.0120	0.05		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.78"
2.8	340	0.0160	2.04		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
19.0	390	Total			

Summary for Subcatchment E3-PR: Subcat E3-PR

Runoff = 1.0 cfs @ 12.40 hrs, Volume= 0.149 af, Depth> 0.50"
Routed to Pond Culvert : (2) 8" Ductile Iron Pipes at Sta 23+50

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.60"

	Area (sf)	CN	Description
	54,235	39	>75% Grass cover, Good, HSG A
	15,030	30	Woods, Good, HSG A
	1,800	98	Roofs, HSG A
*	11,000	98	Massasoit Road
*	69,500	39	ex.>75% Grass cover, Good, HSG A
*	3,000	98	ex. Unconnected roofs, HSG A
	154,565	44	Weighted Average
	138,765		89.78% Pervious Area
	15,800		10.22% Impervious Area
	3,000		18.99% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.7	50	0.0220	0.07		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.78"
2.2	280	0.0170	2.10		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
14.9	330	Total			

Summary for Subcatchment F1-PR: Subcat F1-PR

Runoff = 0.0 cfs @ 12.95 hrs, Volume= 0.017 af, Depth> 0.16"
Routed to Reach DP-F : Flow offsite to Eastern property line

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.60"

	Area (sf)	CN	Description
	39,320	30	Woods, Good, HSG A
	13,460	39	>75% Grass cover, Good, HSG A
	1,800	98	Roofs, HSG A
*	1,260	98	driveway area
	55,840	36	Weighted Average
	52,780		94.52% Pervious Area
	3,060		5.48% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.9	50	0.0260	0.07		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.78"
1.4	220	0.0260	2.60		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
13.3	270	Total			

Summary for Subcatchment G1-PR: Subcat G1-PR

Runoff = 2.6 cfs @ 12.16 hrs, Volume= 0.233 af, Depth> 0.96"
Routed to Reach DP-G : Flow to A-Series

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.60"

	Area (sf)	CN	Adj	Description
	54,075	30		Woods, Good, HSG A
	10,830	39		>75% Grass cover, Good, HSG A
	900	98		Unconnected roofs, HSG A
*	1,260	98		Lot 16 driveway
	59,010	74		Fallow, crop residue, Good, HSG A
	126,075	53	52	Weighted Average, UI Adjusted
	123,915			98.29% Pervious Area
	2,160			1.71% Impervious Area
	900			41.67% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.3	50	0.0020	0.11		**Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.78"
1.7	420	0.0640	4.07		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
9.0	470	Total			

Summary for Subcatchment G2-PR: Subcat G2-PR

Runoff = 0.8 cfs @ 12.10 hrs, Volume= 0.055 af, Depth> 1.89"
Routed to Pond P3 : Stone Infiltration Trench

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 25-Year Rainfall=5.60"

Area (sf)	CN	Description
12,300	74	Fallow, crop residue, Good, HSG A
3,000	30	Woods, Good, HSG A
15,300	65	Weighted Average
15,300		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Reach DP-A: Flow to D-Series

Inflow Area = 1.045 ac, 0.00% Impervious, Inflow Depth > 0.02" for 25-Year event
Inflow = 0.0 cfs @ 17.35 hrs, Volume= 0.002 af
Outflow = 0.0 cfs @ 17.35 hrs, Volume= 0.002 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach DP-B: Flow to northern property line of Map 17 Lot 207

Inflow Area = 1.196 ac, 3.45% Impervious, Inflow Depth > 0.10" for 25-Year event
Inflow = 0.0 cfs @ 14.78 hrs, Volume= 0.010 af
Outflow = 0.0 cfs @ 14.78 hrs, Volume= 0.010 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach DP-C: Flow to F-Series From Intermittent Stream

Inflow Area = 14.079 ac, 2.77% Impervious, Inflow Depth > 0.13" for 25-Year event
Inflow = 0.3 cfs @ 13.99 hrs, Volume= 0.153 af
Outflow = 0.3 cfs @ 13.99 hrs, Volume= 0.153 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach DP-D: Flow to VP at Northern corner/G-Series

Inflow Area = 9.333 ac, 24.81% Impervious, Inflow Depth > 0.02" for 25-Year event
Inflow = 0.0 cfs @ 15.44 hrs, Volume= 0.014 af
Outflow = 0.0 cfs @ 15.44 hrs, Volume= 0.014 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach DP-E: Flow to Central VP/C-Series

Inflow Area = 17.175 ac, 16.08% Impervious, Inflow Depth > 0.21" for 25-Year event
Inflow = 1.0 cfs @ 12.45 hrs, Volume= 0.305 af
Outflow = 1.0 cfs @ 12.45 hrs, Volume= 0.305 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach DP-F: Flow offsite to Eastern property line

Inflow Area = 1.282 ac, 5.48% Impervious, Inflow Depth > 0.16" for 25-Year event
Inflow = 0.0 cfs @ 12.95 hrs, Volume= 0.017 af
Outflow = 0.0 cfs @ 12.95 hrs, Volume= 0.017 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach DP-G: Flow to A-Series

Inflow Area = 3.246 ac, 1.53% Impervious, Inflow Depth > 0.96" for 25-Year event
Inflow = 3.1 cfs @ 12.17 hrs, Volume= 0.258 af
Outflow = 3.1 cfs @ 12.17 hrs, Volume= 0.258 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Pond Culvert: (2) 8" Ductile Iron Pipes at Sta 23+50

Inflow Area = 3.548 ac, 10.22% Impervious, Inflow Depth > 0.50" for 25-Year event
Inflow = 1.0 cfs @ 12.40 hrs, Volume= 0.149 af
Outflow = 1.0 cfs @ 12.40 hrs, Volume= 0.149 af, Atten= 0%, Lag= 0.0 min
Primary = 1.0 cfs @ 12.40 hrs, Volume= 0.149 af
Routed to Reach DP-E : Flow to Central VP/C-Series

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 44.62' @ 12.40 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	44.11'	**8.0" Round Culvert X 2.00** L= 70.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 44.11' / 43.82' S= 0.0041 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 0.35 sf

Primary OutFlow Max=1.0 cfs @ 12.40 hrs HW=44.62' (Free Discharge)
↑**1=Culvert** (Barrel Controls 1.0 cfs @ 2.36 fps)

Summary for Pond P1: Infiltration Basin 1

Inflow Area = 6.207 ac, 36.97% Impervious, Inflow Depth > 1.58" for 25-Year event
Inflow = 9.2 cfs @ 12.21 hrs, Volume= 0.818 af
Outflow = 0.9 cfs @ 14.38 hrs, Volume= 0.630 af, Atten= 90%, Lag= 130.5 min
Discarded = 0.9 cfs @ 14.38 hrs, Volume= 0.630 af
Primary = 0.0 cfs @ 5.00 hrs, Volume= 0.000 af
Routed to Reach DP-D : Flow to VP at Northern corner/G-Series

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 42.04' @ 14.38 hrs Surf.Area= 16,737 sf Storage= 16,512 cf

Plug-Flow detention time= 183.3 min calculated for 0.630 af (77% of inflow)
Center-of-Mass det. time= 123.9 min (949.8 - 825.9)

Volume	Invert	Avail.Storage	Storage Description
#1	41.00'	55,414 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
41.00	14,960	530.0	0	0	14,960
42.00	16,580	550.0	15,763	15,763	16,762
43.00	20,250	645.0	18,384	34,148	25,815
44.00	22,300	650.0	21,267	55,414	26,643

Device	Routing	Invert	Outlet Devices
#1	Discarded	41.00'	**2.410 in/hr Exfiltration over Surface area**
#2	Primary	43.00'	**30.0' long x 15.0' breadth Broad-Crested Rectangular Weir**
			Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60
			Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Discarded OutFlow Max=0.9 cfs @ 14.38 hrs HW=42.04' (Free Discharge)
↑—**1=Exfiltration** (Exfiltration Controls 0.9 cfs)

Primary OutFlow Max=0.0 cfs @ 5.00 hrs HW=41.00' (Free Discharge)
↑—**2=Broad-Crested Rectangular Weir** (Controls 0.0 cfs)

Summary for Pond P2: Infiltration Basin 2

Inflow Area = 7.842 ac, 29.13% Impervious, Inflow Depth > 1.51" for 25-Year event
Inflow = 12.3 cfs @ 12.16 hrs, Volume= 0.987 af
Outflow = 1.3 cfs @ 13.96 hrs, Volume= 0.634 af, Atten= 90%, Lag= 108.0 min
Discarded = 0.8 cfs @ 13.96 hrs, Volume= 0.557 af
Primary = 0.5 cfs @ 13.96 hrs, Volume= 0.077 af
Routed to Reach DP-E : Flow to Central VP/C-Series

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 37.61' @ 13.96 hrs Surf.Area= 14,793 sf Storage= 21,102 cf

Plug-Flow detention time= 192.5 min calculated for 0.632 af (64% of inflow)
Center-of-Mass det. time= 114.3 min (939.5 - 825.2)

Volume	Invert	Avail.Storage	Storage Description
#1	36.00'	43,540 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
36.00	11,550	460.0	0	0	11,550
38.00	15,650	510.0	27,096	27,096	15,530
39.00	17,250	535.0	16,444	43,540	17,673

Device	Routing	Invert	Outlet Devices
#1	Discarded	36.00'	**2.410 in/hr Exfiltration over Surface area**
#2	Primary	38.00'	**16.0' long x 15.0' breadth Broad-Crested Rectangular Weir**
			Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60
			Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

#3	Primary	37.50'	**4.0' long x 0.50' rise Sharp-Crested Rectangular Weir** 2 End Contraction(s) 1.5' Crest Height

Discarded OutFlow Max=0.8 cfs @ 13.96 hrs HW=37.61' (Free Discharge)
└**1=Exfiltration** (Exfiltration Controls 0.8 cfs)

Primary OutFlow Max=0.5 cfs @ 13.96 hrs HW=37.61' (Free Discharge)
├**2=Broad-Crested Rectangular Weir** (Controls 0.0 cfs)
└**3=Sharp-Crested Rectangular Weir** (Weir Controls 0.5 cfs @ 1.07 fps)

Summary for Pond P3: Stone Infiltration Trench

Inflow Area = 0.351 ac, 0.00% Impervious, Inflow Depth > 1.89" for 25-Year event
Inflow = 0.8 cfs @ 12.10 hrs, Volume= 0.055 af
Outflow = 0.6 cfs @ 12.20 hrs, Volume= 0.044 af, Atten= 26%, Lag= 6.0 min
Discarded = 0.0 cfs @ 11.35 hrs, Volume= 0.018 af
Primary = 0.6 cfs @ 12.20 hrs, Volume= 0.026 af
Routed to Reach DP-G : Flow to A-Series

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 52.00' @ 12.15 hrs Surf.Area= 0.010 ac Storage= 0.012 af

Plug-Flow detention time= 87.1 min calculated for 0.044 af (80% of inflow)
Center-of-Mass det. time= 32.2 min (844.6 - 812.3)

Volume	Invert	Avail.Storage	Storage Description
#1	49.00'	0.012 af	**4.00'W x 110.00'L x 3.00'H Prismatoid** 0.030 af Overall x 40.0% Voids

Device	Routing	Invert	Outlet Devices
#0	Primary	52.00'	**Automatic Storage Overflow** (Discharged without head)
#1	Discarded	49.00'	**2.410 in/hr Exfiltration over Surface area**
#2	Primary	51.99'	**110.0' long x 4.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32

Discarded OutFlow Max=0.0 cfs @ 11.35 hrs HW=49.03' (Free Discharge)
└**1=Exfiltration** (Exfiltration Controls 0.0 cfs)

Primary OutFlow Max=0.3 cfs @ 12.20 hrs HW=52.00' (Free Discharge)
└**2=Broad-Crested Rectangular Weir** (Weir Controls 0.3 cfs @ 0.24 fps)

Summary for Subcatchment A1-PR: Subcat A1-PR

Runoff = 0.0 cfs @ 13.91 hrs, Volume= 0.014 af, Depth> 0.16"
Routed to Reach DP-A : Flow to D-Series

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=7.00"

Area (sf)	CN	Description
45,515	30	Woods, Good, HSG A
45,515		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
15.3	50	0.0140	0.05		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.78"
0.1	15	0.0320	2.88		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
15.4	65	Total			

Summary for Subcatchment B1-PR: Subcat B1-PR

Runoff = 0.2 cfs @ 12.47 hrs, Volume= 0.035 af, Depth> 0.35"
Routed to Reach DP-B : Flow to northern property line of Map 17 Lot 207

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=7.00"

Area (sf)	CN	Description
40,960	30	Woods, Good, HSG A
9,350	39	>75% Grass cover, Good, HSG A
1,800	98	Roofs, HSG A
52,110	34	Weighted Average
50,310		96.55% Pervious Area
1,800		3.45% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
10.6	50	0.0350	0.08		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.78"
1.0	175	0.0300	2.79		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
11.6	225	Total			

Summary for Subcatchment C1-PR: Subcat C1-PR

Runoff = 2.1 cfs @ 12.59 hrs, Volume= 0.476 af, Depth> 0.41"
Routed to Reach DP-C : Flow to F-Series From Intermittent Stream

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=7.00"

	Area (sf)	CN	Adj	Description
*	12,830	39		Ex.>75% Grass cover, Good, HSG A
	4,625	96		Gravel surface, HSG A
*	319,140	30		Woods, Good, HSG A
*	63,750	39		NEW>75% Grass cover, Good, HSG A
	6,750	98		Unconnected roofs, HSG A
*	45,500	30		Ex. Woods, Good, HSG A
*	150,450	39		Ex. >75% Grass cover, Good, HSG A
*	10,220	98		Ex. Unconnected roofs, HSG A
	613,265	36	35	Weighted Average, UI Adjusted
	596,295			97.23% Pervious Area
	16,970			2.77% Impervious Area
	16,970			100.00% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
21.4	50	0.0060	0.04		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.78"
0.4	80	0.0550	3.78		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
21.8	130	Total			

Summary for Subcatchment D1-PR: Subcat D1-PR

Runoff = 14.9 cfs @ 12.20 hrs, Volume= 1.280 af, Depth> 2.47"
Routed to Pond P1 : Infiltration Basin 1

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=7.00"

	Area (sf)	CN	Description
*	60,200	98	Roadway/sidewalk
*	10,725	98	12 driveways @ 950 s.f
*	12,800	98	13 half roof areas
	156,167	39	>75% Grass cover, Good, HSG A
	14,790	98	Water Surface, HSG A
*	2,900	30	ex. Woods, Good, HSG A
*	11,355	39	Ex.>75% Grass cover, Good, HSG A
*	1,450	98	Ex. Unconnected roofs, HSG A
	270,387	61	Weighted Average
	170,422		63.03% Pervious Area
	99,965		36.97% Impervious Area
	1,450		1.45% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
4.2	50	0.0500	0.20		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.78"
9.4	1,150	0.0100	2.03		**Shallow Concentrated Flow,** Paved Kv= 20.3 fps
13.6	1,200	Total			

Summary for Subcatchment D2-PR: Subcat D2-PR

Runoff = 0.2 cfs @ 12.58 hrs, Volume= 0.065 af, Depth> 0.25"
Routed to Reach DP-D : Flow to VP at Northern corner/G-Series

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=7.00"

	Area (sf)	CN	Description
	100,680	30	Woods, Good, HSG A
	26,795	39	>75% Grass cover, Good, HSG A
	900	98	Roofs, HSG A
*	7,800	30	ex. Woods, Good, HSG A
	136,175	32	Weighted Average
	135,275		99.34% Pervious Area
	900		0.66% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
13.8	50	0.0180	0.06		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.78"
0.5	70	0.0200	2.28		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
14.3	120	Total			

Summary for Subcatchment E1-PR: Subcat E1-PR

Runoff = 20.1 cfs @ 12.15 hrs, Volume= 1.558 af, Depth> 2.38"
Routed to Pond P2 : Infiltration Basin 2

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=7.00"

	Area (sf)	CN	Description
*	52,685	98	Roadway/sidewalk
*	18,000	98	14 driveways @ 800 s.f & 2 @ 1000 s.f
	15,500	98	Roofs, HSG A
	30,960	49	50-75% Grass cover, Fair, HSG A
	178,845	39	>75% Grass cover, Good, HSG A
	13,309	98	Water Surface, HSG A
	32,300	74	Fallow, crop residue, Good, HSG A
	341,599	60	Weighted Average
	242,105		70.87% Pervious Area
	99,494		29.13% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
5.4	50	0.0260	0.15		**Sheet Flow,** Grass: Short n= 0.150 P2= 2.78"
4.1	400	0.0100	1.61		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
0.4	110	0.0100	4.91	3.86	**Pipe Channel,** 12.0" Round Area= 0.8 sf Perim= 3.1' r= 0.25' n= 0.012 Corrugated PP, smooth interior
9.9	560	Total			

Summary for Subcatchment E2-PR: Subcat E2-PR

Runoff = 1.2 cfs @ 12.53 hrs, Volume= 0.224 af, Depth> 0.47"
Routed to Reach DP-E : Flow to Central VP/C-Series

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=7.00"

	Area (sf)	CN	Description
	148,558	30	Woods, Good, HSG A
	3,852	96	Gravel surface, HSG A
	94,590	39	>75% Grass cover, Good, HSG A
	5,000	98	Roofs, HSG A
	252,000	36	Weighted Average
	247,000		98.02% Pervious Area
	5,000		1.98% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
16.2	50	0.0120	0.05		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.78"
2.8	340	0.0160	2.04		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
19.0	390	Total			

Summary for Subcatchment E3-PR: Subcat E3-PR

Runoff = 2.6 cfs @ 12.27 hrs, Volume= 0.300 af, Depth> 1.01"
Routed to Pond Culvert : (2) 8" Ductile Iron Pipes at Sta 23+50

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=7.00"

	Area (sf)	CN	Description
	54,235	39	>75% Grass cover, Good, HSG A
	15,030	30	Woods, Good, HSG A
	1,800	98	Roofs, HSG A
*	11,000	98	Massasoit Road
*	69,500	39	ex.>75% Grass cover, Good, HSG A
*	3,000	98	ex. Unconnected roofs, HSG A
	154,565	44	Weighted Average
	138,765		89.78% Pervious Area
	15,800		10.22% Impervious Area
	3,000		18.99% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
12.7	50	0.0220	0.07		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.78"
2.2	280	0.0170	2.10		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
14.9	330	Total			

Summary for Subcatchment F1-PR: Subcat F1-PR

Runoff = 0.3 cfs @ 12.44 hrs, Volume= 0.050 af, Depth> 0.47"
Routed to Reach DP-F : Flow offsite to Eastern property line

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=7.00"

	Area (sf)	CN	Description
	39,320	30	Woods, Good, HSG A
	13,460	39	>75% Grass cover, Good, HSG A
	1,800	98	Roofs, HSG A
*	1,260	98	driveway area
	55,840	36	Weighted Average
	52,780		94.52% Pervious Area
	3,060		5.48% Impervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
11.9	50	0.0260	0.07		**Sheet Flow,** Woods: Light underbrush n= 0.400 P2= 2.78"
1.4	220	0.0260	2.60		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
13.3	270	Total			

Summary for Subcatchment G1-PR: Subcat G1-PR

Runoff = 5.0 cfs @ 12.15 hrs, Volume= 0.402 af, Depth> 1.67"
Routed to Reach DP-G : Flow to A-Series

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=7.00"

	Area (sf)	CN	Adj	Description
	54,075	30		Woods, Good, HSG A
	10,830	39		>75% Grass cover, Good, HSG A
	900	98		Unconnected roofs, HSG A
*	1,260	98		Lot 16 driveway
	59,010	74		Fallow, crop residue, Good, HSG A
	126,075	53	52	Weighted Average, UI Adjusted
	123,915			98.29% Pervious Area
	2,160			1.71% Impervious Area
	900			41.67% Unconnected

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
7.3	50	0.0020	0.11		**Sheet Flow,** Cultivated: Residue<=20% n= 0.060 P2= 2.78"
1.7	420	0.0640	4.07		**Shallow Concentrated Flow,** Unpaved Kv= 16.1 fps
9.0	470	Total			

Summary for Subcatchment G2-PR: Subcat G2-PR

Runoff = 1.2 cfs @ 12.10 hrs, Volume= 0.084 af, Depth> 2.87"
Routed to Pond P3 : Stone Infiltration Trench

Runoff by SCS TR-20 method, UH=SCS, Weighted-CN, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Type III 24-hr 100-Year Rainfall=7.00"

Area (sf)	CN	Description
12,300	74	Fallow, crop residue, Good, HSG A
3,000	30	Woods, Good, HSG A
15,300	65	Weighted Average
15,300		100.00% Pervious Area

Tc (min)	Length (feet)	Slope (ft/ft)	Velocity (ft/sec)	Capacity (cfs)	Description
6.0					**Direct Entry,**

Summary for Reach DP-A: Flow to D-Series

Inflow Area = 1.045 ac, 0.00% Impervious, Inflow Depth > 0.16" for 100-Year event
Inflow = 0.0 cfs @ 13.91 hrs, Volume= 0.014 af
Outflow = 0.0 cfs @ 13.91 hrs, Volume= 0.014 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach DP-B: Flow to northern property line of Map 17 Lot 207

Inflow Area = 1.196 ac, 3.45% Impervious, Inflow Depth > 0.35" for 100-Year event
Inflow = 0.2 cfs @ 12.47 hrs, Volume= 0.035 af
Outflow = 0.2 cfs @ 12.47 hrs, Volume= 0.035 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach DP-C: Flow to F-Series From Intermittent Stream

Inflow Area = 14.079 ac, 2.77% Impervious, Inflow Depth > 0.41" for 100-Year event
Inflow = 2.1 cfs @ 12.59 hrs, Volume= 0.476 af
Outflow = 2.1 cfs @ 12.59 hrs, Volume= 0.476 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach DP-D: Flow to VP at Northern corner/G-Series

Inflow Area = 9.333 ac, 24.81% Impervious, Inflow Depth > 0.08" for 100-Year event
Inflow = 0.2 cfs @ 12.58 hrs, Volume= 0.065 af
Outflow = 0.2 cfs @ 12.58 hrs, Volume= 0.065 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach DP-E: Flow to Central VP/C-Series

Inflow Area = 17.175 ac, 16.08% Impervious, Inflow Depth > 0.75" for 100-Year event
Inflow = 7.4 cfs @ 12.55 hrs, Volume= 1.072 af
Outflow = 7.4 cfs @ 12.55 hrs, Volume= 1.072 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach DP-F: Flow offsite to Eastern property line

Inflow Area = 1.282 ac, 5.48% Impervious, Inflow Depth > 0.47" for 100-Year event
Inflow = 0.3 cfs @ 12.44 hrs, Volume= 0.050 af
Outflow = 0.3 cfs @ 12.44 hrs, Volume= 0.050 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Reach DP-G: Flow to A-Series

Inflow Area = 3.246 ac, 1.53% Impervious, Inflow Depth > 1.68" for 100-Year event
Inflow = 6.1 cfs @ 12.14 hrs, Volume= 0.454 af
Outflow = 6.1 cfs @ 12.14 hrs, Volume= 0.454 af, Atten= 0%, Lag= 0.0 min

Routing by Stor-Ind+Trans method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs

Summary for Pond Culvert: (2) 8" Ductile Iron Pipes at Sta 23+50

Inflow Area = 3.548 ac, 10.22% Impervious, Inflow Depth > 1.01" for 100-Year event
Inflow = 2.6 cfs @ 12.27 hrs, Volume= 0.300 af
Outflow = 2.6 cfs @ 12.27 hrs, Volume= 0.300 af, Atten= 0%, Lag= 0.0 min
Primary = 2.6 cfs @ 12.27 hrs, Volume= 0.300 af
Routed to Reach DP-E : Flow to Central VP/C-Series

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 45.59' @ 12.27 hrs

Device	Routing	Invert	Outlet Devices
#1	Primary	44.11'	**8.0" Round Culvert X 2.00** L= 70.0' CPP, projecting, no headwall, Ke= 0.900 Inlet / Outlet Invert= 44.11' / 43.82' S= 0.0041 '/' Cc= 0.900 n= 0.012 Corrugated PP, smooth interior, Flow Area= 0.35 sf

Primary OutFlow Max=2.6 cfs @ 12.27 hrs HW=45.57' (Free Discharge)
↑—**1=Culvert** (Barrel Controls 2.6 cfs @ 3.68 fps)

Summary for Pond P1: Infiltration Basin 1

Inflow Area = 6.207 ac, 36.97% Impervious, Inflow Depth > 2.47" for 100-Year event
Inflow = 14.9 cfs @ 12.20 hrs, Volume= 1.280 af
Outflow = 1.1 cfs @ 15.24 hrs, Volume= 0.754 af, Atten= 93%, Lag= 182.2 min
Discarded = 1.1 cfs @ 15.24 hrs, Volume= 0.754 af
Primary = 0.0 cfs @ 5.00 hrs, Volume= 0.000 af
Routed to Reach DP-D : Flow to VP at Northern corner/G-Series

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 42.81' @ 15.24 hrs Surf.Area= 19,520 sf Storage= 30,347 cf

Plug-Flow detention time= 204.7 min calculated for 0.752 af (59% of inflow)
Center-of-Mass det. time= 125.0 min (940.9 - 816.0)

Volume	Invert	Avail.Storage	Storage Description
#1	41.00'	55,414 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
41.00	14,960	530.0	0	0	14,960
42.00	16,580	550.0	15,763	15,763	16,762
43.00	20,250	645.0	18,384	34,148	25,815
44.00	22,300	650.0	21,267	55,414	26,643

Device	Routing	Invert	Outlet Devices
#1	Discarded	41.00'	**2.410 in/hr Exfiltration over Surface area**
#2	Primary	43.00'	**30.0' long x 15.0' breadth Broad-Crested Rectangular Weir**
			Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60
			Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

Discarded OutFlow Max=1.1 cfs @ 15.24 hrs HW=42.81' (Free Discharge)
↑—**1=Exfiltration** (Exfiltration Controls 1.1 cfs)

Primary OutFlow Max=0.0 cfs @ 5.00 hrs HW=41.00' (Free Discharge)
↑—**2=Broad-Crested Rectangular Weir** (Controls 0.0 cfs)

Summary for Pond P2: Infiltration Basin 2

Inflow Area = 7.842 ac, 29.13% Impervious, Inflow Depth > 2.38" for 100-Year event
Inflow = 20.1 cfs @ 12.15 hrs, Volume= 1.558 af
Outflow = 5.4 cfs @ 12.60 hrs, Volume= 1.148 af, Atten= 73%, Lag= 27.2 min
Discarded = 0.9 cfs @ 12.60 hrs, Volume= 0.601 af
Primary = 4.5 cfs @ 12.60 hrs, Volume= 0.547 af
Routed to Reach DP-E : Flow to Central VP/C-Series

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 37.99' @ 12.60 hrs Surf.Area= 15,625 sf Storage= 26,920 cf

Plug-Flow detention time= 129.4 min calculated for 1.148 af (74% of inflow)
Center-of-Mass det. time= 64.9 min (879.8 - 814.9)

Volume	Invert	Avail.Storage	Storage Description
#1	36.00'	43,540 cf	**Custom Stage Data (Irregular)** Listed below (Recalc)

Elevation (feet)	Surf.Area (sq-ft)	Perim. (feet)	Inc.Store (cubic-feet)	Cum.Store (cubic-feet)	Wet.Area (sq-ft)
36.00	11,550	460.0	0	0	11,550
38.00	15,650	510.0	27,096	27,096	15,530
39.00	17,250	535.0	16,444	43,540	17,673

Device	Routing	Invert	Outlet Devices
#1	Discarded	36.00'	**2.410 in/hr Exfiltration over Surface area**
#2	Primary	38.00'	**16.0' long x 15.0' breadth Broad-Crested Rectangular Weir**
			Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60
			Coef. (English) 2.68 2.70 2.70 2.64 2.63 2.64 2.64 2.63

#3	Primary	37.50'	**4.0' long x 0.50' rise Sharp-Crested Rectangular Weir** 2 End Contraction(s) 1.5' Crest Height

Discarded OutFlow Max=0.9 cfs @ 12.60 hrs HW=37.99' (Free Discharge)
└**1=Exfiltration** (Exfiltration Controls 0.9 cfs)

Primary OutFlow Max=4.5 cfs @ 12.60 hrs HW=37.99' (Free Discharge)
├**2=Broad-Crested Rectangular Weir** (Controls 0.0 cfs)
└**3=Sharp-Crested Rectangular Weir** (Weir Controls 4.5 cfs @ 2.38 fps)

Summary for Pond P3: Stone Infiltration Trench

Inflow Area = 0.351 ac, 0.00% Impervious, Inflow Depth > 2.87" for 100-Year event
Inflow = 1.2 cfs @ 12.10 hrs, Volume= 0.084 af
Outflow = 1.2 cfs @ 12.12 hrs, Volume= 0.072 af, Atten= 3%, Lag= 1.6 min
Discarded = 0.0 cfs @ 10.75 hrs, Volume= 0.020 af
Primary = 1.2 cfs @ 12.12 hrs, Volume= 0.052 af
Routed to Reach DP-G : Flow to A-Series

Routing by Stor-Ind method, Time Span= 5.00-20.00 hrs, dt= 0.05 hrs
Peak Elev= 52.00' @ 12.05 hrs Surf.Area= 0.010 ac Storage= 0.012 af

Plug-Flow detention time= 59.3 min calculated for 0.072 af (86% of inflow)
Center-of-Mass det. time= 16.5 min (819.6 - 803.1)

Volume	Invert	Avail.Storage	Storage Description
#1	49.00'	0.012 af	**4.00'W x 110.00'L x 3.00'H Prismatoid** 0.030 af Overall x 40.0% Voids

Device	Routing	Invert	Outlet Devices
#0	Primary	52.00'	**Automatic Storage Overflow** (Discharged without head)
#1	Discarded	49.00'	**2.410 in/hr Exfiltration over Surface area**
#2	Primary	51.99'	**110.0' long x 4.0' breadth Broad-Crested Rectangular Weir** Head (feet) 0.20 0.40 0.60 0.80 1.00 1.20 1.40 1.60 1.80 2.00 2.50 3.00 3.50 4.00 4.50 5.00 5.50 Coef. (English) 2.38 2.54 2.69 2.68 2.67 2.67 2.65 2.66 2.66 2.68 2.72 2.73 2.76 2.79 2.88 3.07 3.32

Discarded OutFlow Max=0.0 cfs @ 10.75 hrs HW=49.03' (Free Discharge)
└**1=Exfiltration** (Exfiltration Controls 0.0 cfs)

Primary OutFlow Max=0.3 cfs @ 12.12 hrs HW=52.00' (Free Discharge)
└**2=Broad-Crested Rectangular Weir** (Weir Controls 0.3 cfs @ 0.24 fps)

TSS Calculations

INSTRUCTIONS:

Version 1, Automated: Mar. 4, 2008

1. In BMP Column, click on Blue Cell to Activate Drop Down Menu
2. Select BMP from Drop Down Menu
3. After BMP is selected, TSS Removal and other Columns are automatically completed.

TSS Removal Calculation
PRETREATMENT

Location: Flow to Infiltration Basin #1

PRETREATMENT OF INFILTRATION BASIN #1

B BMP[1]	C TSS Removal Rate[1]	D Starting TSS Load*	E Amount Removed (C*D)	F Remaining Load (D-E)
Deep Sump and Hooded Catch Basin	**0.25**	**1.00**	**0.25**	**0.75**
Sediment Forebay	**0.25**	**0.75**	**0.19**	**0.56**
		Total TSS Removal =	**44%**	**Separate Form Needs to be Completed for Each Outlet or BMP Train**

Project: **Bell Farm Estates**

Prepared By: **CJV**

Date: **12/4/2024**

*Equals remaining load from previous BMP (E)

which enters the BMP

INSTRUCTIONS:

Version 1, Automated: Mar. 4, 2008

1. In BMP Column, click on Blue Cell to Activate Drop Down Menu
2. Select BMP from Drop Down Menu
3. After BMP is selected, TSS Removal and other Columns are automatically completed.

Location: Flow to Infiltration Basin #1

TREATMENT OF INFILTRATION BASIN #1

TSS Removal Calculation
TOTAL TREATMENT

B BMP[1]	C TSS Removal Rate[1]	D Starting TSS Load*	E Amount Removed (C*D)	F Remaining Load (D-E)
Deep Sump and Hooded Catch Basin	**0.25**	**1.00**	**0.25**	**0.75**
Infiltration Basin	**0.80**	**0.75**	**0.60**	**0.15**

Total TSS Removal = **85%**

Separate Form Needs to be Completed for Each Outlet or BMP Train

Project: **Bell Farm Estates**

Prepared By: **CJV**

Date: **12/4/2024**

*Equals remaining load from previous BMP (E)

which enters the BMP

INSTRUCTIONS:

Version 1, Automated: Mar. 4, 2008

1. In BMP Column, click on Blue Cell to Activate Drop Down Menu
2. Select BMP from Drop Down Menu
3. After BMP is selected, TSS Removal and other Columns are automatically completed.

Location: Flow to Infiltration Basin #2

PRETREATMENT OF INFILTRATION BASIN #2

TSS Removal Calculation PRETREATMENT

B BMP[1]	C TSS Removal Rate[1]	D Starting TSS Load*	E Amount Removed (C*D)	F Remaining Load (D-E)
Deep Sump and Hooded Catch Basin	**0.25**	**1.00**	**0.25**	**0.75**
Sediment Forebay	**0.25**	**0.75**	**0.19**	**0.56**
		Total TSS Removal =	**44%**	**Separate Form Needs to be Completed for Each Outlet or BMP Train**

Project: **Bell Farm Estates**

Prepared By: **CJV**

Date: **12/4/2024**

*Equals remaining load from previous BMP (E)

which enters the BMP

INSTRUCTIONS:

Version 1, Automated: Mar. 4, 2008

1. In BMP Column, click on Blue Cell to Activate Drop Down Menu
2. Select BMP from Drop Down Menu
3. After BMP is selected, TSS Removal and other Columns are automatically completed.

Location: Flow to Infiltration Basin #2

TREATMENT OF INFILTRATION BASIN #2

TSS Removal Calculation
TOTAL TREATMENT

B BMP[1]	C TSS Removal Rate[1]	D Starting TSS Load*	E Amount Removed (C*D)	F Remaining Load (D-E)
Deep Sump and Hooded Catch Basin	**0.25**	**1.00**	**0.25**	**0.75**
Infiltration Basin	**0.80**	**0.75**	**0.60**	**0.15**

Total TSS Removal = **85%**

Separate Form Needs to be Completed for Each Outlet or BMP Train

Project: **Bell Farm Estates**

Prepared By: **CJV**

Date: **12/4/2024**

*Equals remaining load from previous BMP (E)

which enters the BMP

Sediment Forebay Calculations

Sediment Forebay Calculation

Project Name:	Bell Farm Estates	Date:	12/4/2024
Project Location:	0 Milk Street & 0 Council Oak way	Calculated By:	CJV
Project Number:	315-430	Checked By:	KPS

SEDIMENT FOREBAY SIZING CALCULATION FOR INFIL. BASIN #1

TOTAL CONTRIBUTING IMPERVIOUS AREA TO FOREBAY

= 85,175 s.f.

REQUIRED VOLUME OF SEDIMENT FOREBAY = VOLUME PRODUCED BY 0.1" RUNOFF/IMPERVIOUS ACRE

REQ'D SED. FOREBAY VOLUME = 0.1" INCHES X $\frac{1\ FT}{12\ IN}$ X 85,175 S.F.

= 710 C.F.

PROVIDED VOLUME OF SEDIMENT FOREBAY in FOREBAY

BOTTOM FOREBAY EL. = 40.50 AREA = 950 S.F.

FOREBAY BERM EL. = 42.00 AREA = 1,500 S.F.

VOLUME PROVIDED = 1,838 C.F.

Sediment Forebay Calculation

Project Name: Bell Farm Estates
Project Location: 0 Milk Street & 0 Council Oak way
Project Number: 315-430

Date: 12/4/2024
Calculated By: CJV
Checked By: KPS

SEDIMENT FOREBAY SIZING CALCULATION FOR INFIL. BASIN #2

TOTAL CONTRIBUTING IMPERVIOUS AREA TO FOREBAY

= 86,185 s.f.

REQUIRED VOLUME OF SEDIMENT FOREBAY = VOLUME PRODUCED BY 0.1" RUNOFF/IMPERVIOUS ACRE

REQ'D SED. FOREBAY VOLUME = 0.1" INCHES X $\frac{1\ FT}{12\ IN}$ X 86,185 S.F.

= 718 C.F.

PROVIDED VOLUME OF SEDIMENT FOREBAY in FOREBAY

BOTTOM FOREBAY EL. = 36.00 AREA = 850 S.F.
FOREBAY BERM EL. = 37.00 AREA = 1,200 S.F.

VOLUME PROVIDED = 1,025 C.F.

Water Quality Calculations

Water Quality Volume Calculations

Project Name: Bell Farm Estates
Project Location: Dighton MA
Project Number: 315-430

Date: 12/4/2024
Calculated By: CJV
Checked By: KPS

Structure Name: P1

Description: Infiltration basin #1

Total Drainage Area:	270,387	sq ft
	6.21	ac
Total Impervious Area:	85,175	sq ft
	1.96	ac
Runoff Depth to be Treated:	1.0	inches

Required Water Quality Volume:		
	7,098	**cf**
	0.16	ac ft

Provided Water Quality Volume

Volume provided from Inifiltration Basin

Bottom of Basin:	41	ft
Low Flow Outlet Elevation:	43	ft
Water Quality Volume Provided: (See Recharge Calculations & HydroCAD Report)	**34,148**	cu ft

Provided Water Quality Volume:		
	34,148	**cf**
	0.78	ac ft

Water Quality Volume Calculations

Project Name: Bell Farm Estates
Project Location: Dighton MA
Project Number: 315-430

Date: 12/4/2024
Calculated By: CJV
Checked By: KPS

Structure Name: P2

Description: Infiltration basin #2

Total Drainage Area:	335,095	sq ft
	7.69	ac
Total Impervious Area:	86,185	sq ft
	1.98	ac
Runoff Depth to be Treated:	1.0	inches

Required Water Quality Volume:		
	7,182	**cf**
	0.16	ac ft

Provided Water Quality Volume

Volume provided from Inifiltration Basin

Bottom of Basin:	36	ft
Low Flow Outlet Elevation:	37.5	ft
Water Quality Volume Provided: (See Recharge Calculations & HydroCAD Report)	19,544	cu ft

Provided Water Quality Volume:		
	19,544	**cf**
	0.45	ac ft

Groundwater Recharge Calculations

Groundwater Recharge Calculations

Project Name: Bell Farm Estates
Project Location: Milk Street
Project Number: 315-430

Date: 11/19/2024
Calculated By: CJV
Checked By: KPS

Existing Conditions Impervious Area

Hydrologic Soil Group	Area (sq ft)	Area (acres)	Recharge Depth (in)	Volume (cu ft)
A	25,670	0.59	0.60	1283.5
B	0	0.00	0.35	0.0
C	0	0.00	0.25	0.0
D	0	0.00	0.10	0.0
TOTAL	**25,670**	**0.59**		**1,284**

Proposed Conditions Impervious Area

Hydrologic Soil Group	Area (sq ft)	Area (acres)	Recharge Depth (in)	Volume (cu ft)
A	191,380	4.39	0.60	9569.0
B	0	0.00	0.35	0.0
C	0	0.00	0.25	0.0
D		0.00	0.10	0.0
TOTAL	**191,380**	**4.39**		**9,569**

Net Required Recharge Volume:	**8,286**	**cu ft**

Provided Recharge Volume

Pond P1	34,148 cf	*Infiltration Basin #1*
TOTAL	34,148 cf	
Pond P2	19,554 cf	*Infiltration Basin #2*
TOTAL	19,554 cf	
Total Provided	**53,702**	**cu ft**

Groundwater Recharge Calculations

Project Name:	Bell Farm Estates	Date:	11/19/2024
Project Location:	Milk Street	Calculated By:	CJV
Project Number:	315-430	Checked By:	KPS
			2 of 3

Stormwater BMP: Pond P1

Description: Infiltration Basin #1

Provided Recharge Volume

Bottom of Basin:	41.00	ft	
Outlet Elevation:	43.00	ft	
*** Volume Provided:	0.78	ac ft	
	34,148	cu ft	*** (See attached HydroCAD output)

Total Provided Recharge Volume: 34,148 cu ft

72-hour Drawdown Calculation

Provided Recharge Volume:	34,148	cu ft	
Saturated Hydraulic Conductivity:	2.41	in / hr	Per Test Pit TP-01, TP-S2 and TP- S3
Bottom Area:	14,960	sq ft	
Drawdown Time:	**11.4**	**hours**	

Stage-Area-Storage for Pond P1: Infiltration Basin 1

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
41.00	14,960	0
41.05	15,039	750
41.10	15,118	1,504
41.15	15,198	2,262
41.20	15,277	3,024
41.25	15,357	3,790
41.30	15,437	4,559
41.35	15,518	5,333
41.40	15,598	6,111
41.45	15,679	6,893
41.50	15,760	7,679
41.55	15,841	8,469
41.60	15,922	9,263
41.65	16,004	10,061
41.70	16,085	10,863
41.75	16,167	11,670
41.80	16,249	12,480
41.85	16,332	13,295
41.90	16,414	14,113
41.95	16,497	14,936
42.00	16,580	15,763
42.05	16,755	16,596
42.10	16,931	17,439
42.15	17,107	18,289
42.20	17,285	19,149
42.25	17,463	20,018
42.30	17,643	20,896
42.35	17,823	21,782
42.40	18,004	22,678
42.45	18,186	23,583
42.50	18,369	24,497
42.55	18,553	25,420
42.60	18,738	26,352
42.65	18,924	27,293
42.70	19,111	28,244
42.75	19,298	29,204
42.80	19,487	30,174
42.85	19,676	31,153
42.90	19,867	32,142
42.95	20,058	33,140
43.00	20,250	34,148
43.05	20,350	35,163
43.10	20,451	36,183
43.15	20,551	37,208
43.20	20,652	38,238
43.25	20,753	39,273
43.30	20,855	40,313
43.35	20,956	41,358
43.40	21,058	42,409
43.45	21,160	43,464
43.50	21,263	44,525
43.55	21,365	45,590
43.60	21,468	46,661
43.65	21,571	47,737
43.70	21,675	48,818
43.75	21,778	49,905
43.80	21,882	50,996
43.85	21,986	52,093
43.90	22,091	53,195
43.95	22,195	54,302
44.00	**22,300**	**55,414**

Groundwater Recharge Calculations

Project Name:	Bell Farm Estates	Date:	11/19/2024
Project Location:	Milk Street	Calculated By:	CJV
Project Number:	315-430	Checked By:	KPS
			3 of 3

Stormwater BMP: Pond P2

Description: Infiltration Basin #2

Provided Recharge Volume

Bottom of Basin:	36.00	ft	
Outlet Elevation:	37.50	ft	
*** Volume Provided:	0.45	ac ft	
	19,554	cu ft	*** (See attached HydroCAD output)

Total Provided Recharge Volume: 19,554 cu ft

72-hour Drawdown Calculation

Provided Recharge Volume:	19,554	cu ft	
Saturated Hydraulic Conductivity:	2.41	in / hr	Per Test Pit TP-16
Bottom Area:	11,550	sq ft	
Drawdown Time:	**8.4**	**hours**	

Stage-Area-Storage for Pond P2: Infiltration Basin 2

Elevation (feet)	Surface (sq-ft)	Storage (cubic-feet)
36.00	11,550	0
36.05	11,645	580
36.10	11,740	1,164
36.15	11,836	1,754
36.20	11,932	2,348
36.25	12,029	2,947
36.30	12,125	3,551
36.35	12,223	4,160
36.40	12,320	4,773
36.45	12,418	5,392
36.50	12,517	6,015
36.55	12,616	6,643
36.60	12,715	7,277
36.65	12,814	7,915
36.70	12,914	8,558
36.75	13,015	9,206
36.80	13,115	9,860
36.85	13,217	10,518
36.90	13,318	11,181
36.95	13,420	11,850
37.00	13,522	12,523
37.05	13,625	13,202
37.10	13,728	13,886
37.15	13,832	14,575
37.20	13,935	15,269
37.25	14,040	15,968
37.30	14,144	16,673
37.35	14,249	17,383
37.40	14,355	18,098
37.45	14,461	18,818
37.50	14,567	19,544
37.55	14,673	20,275
37.60	14,780	21,011
37.65	14,888	21,753
37.70	14,995	22,500
37.75	15,104	23,252
37.80	15,212	24,010
37.85	15,321	24,774
37.90	15,430	25,542
37.95	15,540	26,317
38.00	15,650	27,096
38.05	15,728	27,881
38.10	15,806	28,669
38.15	15,885	29,462
38.20	15,964	30,258
38.25	16,043	31,058
38.30	16,122	31,862
38.35	16,201	32,670
38.40	16,281	33,482
38.45	16,360	34,298
38.50	16,440	35,118
38.55	16,520	35,942
38.60	16,601	36,770
38.65	16,681	37,602
38.70	16,762	38,438
38.75	16,843	39,278
38.80	16,924	40,123
38.85	17,005	40,971
38.90	17,086	41,823
38.95	17,168	42,679
39.00	**17,250**	**43,540**

Low Flow Outlet Elevation

Pipe Capacity & Drainage Inlet Calculations

	Project Name:	Bell Farm Estates				Date:	12/12/2024			**Storm Drainage Pipe Calculations**				
	Project Location:	0 Milk St & 0 Council Oak Way				Calculated by:	CJV							* Culverts sized to convey storms up to and including 25-year storm event. Refer to HydroCAD for hydrologic analysis.
	Project Number:	315-430				Checked by:	KPS							
	LOCATION		**DESIGN**					**CAPACITY**		**PROFILE**					**NOTES**
DESCRIPTION	FROM	TO	Q	V	n	PIPE	SLOPE	Q full	V full	LENGTH	FALL	RIM	INV	INV	
			cfs	fps		SIZE		ft^3/s	ft/s	ft	ft		UPPER	LOWER	
	CB-1A	DMH1	1.9	4.8	0.012	12	0.015	4.7	6.0	14	0.21	47.80	44.08	43.87	20% of subcatchment D1-PR
	CB-1B	DMH1	2.6	4.5	0.012	12	0.010	3.9	4.9	21	0.21	47.80	44.08	43.87	27% of subcatchment D1-PR
	DMH1	DMH2	4.5	5.2	0.012	15	0.010	7.0	5.7	216	2.15	47.75	43.87	41.72	47% of subcatchment D1-PR
	CB-2A	DMH2	0.5	2.9	0.012	12	0.013	4.5	5.7	8	0.10	45.31	41.55	41.45	5% of subcatchment D1-PR
	CB-2B	DMH2	0.7	3.2	0.012	12	0.011	4.0	5.2	40	0.44	45.16	42.16	41.72	7% of subcatchment D1-PR
	CB-4A	DMH4	0.5	3.2	0.012	12	0.017	5.0	6.3	12	0.20	46.77	43.69	43.49	6% of subcatchment D1-PR
	CB-4B	DMH4	0.6	2.9	0.012	12	0.010	3.9	4.9	20	0.20	46.77	43.69	43.49	7% of subcatchment D1-PR
	DMH4	DMH2	1.1	3.9	0.012	12	0.013	4.4	5.6	135	1.77	46.76	43.49	41.72	72% of subcatchment D1-PR
	DMH2	DMH3	6.9	5.0	0.012	18	0.007	9.5	5.4	138	0.96	45.50	41.72	40.76	72% of subcatchment D1-PR
	CB-3A	DMH3	0.4	2.7	0.013	12	0.014	4.2	5.4	17	0.24	44.13	41.00	40.76	5% of subcatchment D1-PR
	CB-3B	DMH3	0.6	2.9	0.012	12	0.010	3.9	4.9	24	0.24	44.13	41.00	40.76	7% of subcatchment D1-PR
	DMH3	FE-1	8.0	5.3	0.012	18	0.007	9.5	5.4	37	0.26	44.30	40.76	40.50	84% of subcatchment D1-PR (outflow to Infil Basin #1)
	CB-5A	DMH6	0.5	3.1	0.012	12	0.015	4.8	6.1	15	0.23	45.33	42.49	42.26	5% of Subcatchment D1-PR
	CB-5B	DMH5	0.2	2.0	0.012	12	0.010	3.9	5.0	22	0.23	45.33	42.49	42.26	2% of Subcatchment D1-PR
	DMH5	DMH5A	0.7	3.1	0.012	12	0.010	3.9	4.9	118	1.19	45.34	42.26	41.07	7% of subcatchment D1-PR
	DMH5A	FE-2	0.7	2.7	0.012	12	0.007	3.3	4.1	52	0.37	44.34	41.07	40.70	7% of subcatchment D1-PR (outflow to Infil Basin #1)
	CB-6A	DMH6	0.6	3.3	0.012	12	0.015	4.7	6.0	14	0.21	43.32	39.48	39.27	5% of subcatchment E1-PR
	CB-6B	DMH6	0.4	2.4	0.012	12	0.010	3.9	4.9	21	0.21	43.32	39.48	39.27	3% of subcatchment E1-PR
	DMH6	DMH7	1.0	3.4	0.012	12	0.010	3.9	4.9	232	2.34	43.27	39.27	36.93	8% of subcatchment E1-PR
	CB-7A	DMH7	5.5	5.5	0.012	15	0.010	7.0	5.7	13	0.13	40.10	37.06	36.93	45% of subcatchment E1-PR

	Project Name:	Bell Farm Estates				Date:	12/12/2024			**Storm Drainage Pipe Calculations**					
	Project Location:	0 Milk St & 0 Council Oak Way				Calculated by:	CJV								* Culverts sized to convey storms up to and including 25-year storm event. Refer to HydroCAD for hydrologic analysis.
	Project Number:	315-430				Checked by:	KPS								
	LOCATION		**DESIGN**					**CAPACITY**		**PROFILE**					**NOTES**
DESCRIPTION	FROM	TO	Q	V	n	PIPE	SLOPE	Q full	V full	LENGTH	FALL	RIM	INV	INV	
			cfs	fps		SIZE		ft^3/s	ft/s	ft	ft		UPPER	LOWER	
	CB-7B	DMH7	0.7	3.1	0.012	12	0.010	3.9	4.9	13	0.13	40.10	37.06	36.93	6% of subcatchment E1-PR
	DMH7	FE-3	7.1	5.8	0.012	18	0.010	11.4	6.4	43	0.43	40.43	36.93	36.50	59% of subcatchment E1-PR (outflow to Infil Basin #2)
	CB-11A	DMH11	0.6	3.2	0.012	12	0.015	4.7	6.0	15	0.22	45.72	42.32	42.10	5% of subcatchment E1-PR
	CB-11B	DMH11	0.6	2.9	0.012	12	0.010	3.9	4.9	22	0.22	45.72	42.32	42.10	5% of subcatchment E1-PR
	DMH11	DMH10	1.2	4.2	0.012	12	0.015	4.7	6.0	110	1.65	45.68	42.10	40.45	10% of subcatchment E1-PR
	CB-13A	DMH13	0.6	2.9	0.012	12	0.010	3.9	4.9	19	0.19	49.05	42.56	42.37	5% of subcatchment E1-PR
	CB-13B	DMH13	0.6	3.4	0.012	12	0.017	5.1	6.5	11	0.19	49.05	42.56	42.37	5% of subcatchment E1-PR
	CB-12A	DMH12	0.5	2.7	0.012	12	0.010	3.9	4.9	18	0.18	44.75	40.43	40.25	4% of subcatchment E1-PR
	CB-12B	DMH12	0.6	3.9	0.012	12	0.026	6.2	7.9	7	0.18	44.75	40.43	40.25	5% of subcatchment E1-PR
	DMH13	DMH12	1.2	3.7	0.012	12	0.010	3.9	4.9	211	2.12	49.02	42.37	40.25	10% of subcatchment E1-PR
	DMH12	DMH10	3.5	5.1	0.012	15	0.012	7.6	6.2	67	0.80	44.81	40.25	39.45	29% of subcatchment E1-PR
	CB-9A	DMH9	0.4	3.3	0.012	12	0.028	6.5	8.2	6	0.18	42.81	38.90	38.72	3% of subcatchment E1-PR
	CB-9B	DMH9	0.5	2.7	0.012	12	0.010	3.9	5.0	18	0.18	42.81	38.90	38.72	4% of subcatchment E1-PR
	DMH10	DMH9	3.5	4.8	0.012	15	0.010	7.0	5.7	73	0.73	44.10	39.45	38.72	36% of subcatchment E1-PR
	DMH9	DMH8	4.3	5.1	0.012	15	0.010	7.0	5.7	173	1.72	43.16	38.72	37.00	36% of subcatchment E1-PR
	DMH8	FE-4	4.3	5.1	0.012	15	0.010	7.0	5.7	50	0.50	40.82	37.00	36.50	36% of subcatchment E1-PR (outflow to Infil Basin #2)

Storm Drainage Inlet Calculations

Project Name: Bell Farm Estates
Project Location: 0 Milk Street and 0 Council Oak way
Project Number: 315-430

Date: 12/12/2024
Calculated by: CJV
Checked by: KPS

CB #	Flow to CB (cfs)	Grate Type	Grate Area (sf)	Head (ft)	Head (in)	Grate Capacity (cfs)	Adequate Capacity (Y/N)
CB-1A*	1.9	B	3.13	0.10	1.20	4.05	YES
CB-2B*	2.6	B	3.13	0.10	1.20	4.05	YES
CB-2A	0.5	A	1.56	0.10	1.20	2.02	YES
CB-2B	0.7	A	1.56	0.10	1.20	2.02	YES
CB-3A	0.4	A	1.56	0.25	3.00	3.19	YES
CB-3B	0.6	A	1.56	0.25	3.00	3.19	YES
CB-4A	0.5	A	1.56	0.10	1.20	2.02	YES
CB-4B	0.6	A	1.56	0.10	1.20	2.02	YES
CB-5A	0.5	A	1.56	0.10	1.20	2.02	YES
CB-5B	0.2	A	1.56	0.10	1.20	2.02	YES
CB-6A	0.6	A	1.56	0.10	1.20	2.02	YES
CB-6B	0.4	A	1.56	0.10	1.20	2.02	YES
CB-7A**	5.5	B	3.13	0.25	3.00	6.41	YES
CB-7B	0.7	A	1.56	0.25	3.00	3.19	YES
CB-12A	0.5	A	1.56	0.10	1.20	2.02	YES
CB-12B	0.6	A	1.56	0.10	1.20	2.02	YES
CB-13A	0.6	A	1.56	0.10	1.20	2.02	YES
CB-13B	0.6	A	1.56	0.10	1.20	2.02	YES
CB-9A	0.4	A	1.56	0.10	1.20	2.02	YES
CB-9B	0.5	A	1.56	0.10	1.20	2.02	YES

Notes: Catch Basins 1A and 1B shall be double cascade frame and grates (Lebaron LkK20D or LK121D)
Catch Basin 7A shall be a double standard frame and grate (Lebaron LV 2448-2)

1. CxA values from storm drainage calcs.
2. Grate Types:

Name	Type	Area (sf)
Lebaron LF 248-2	A	1.56
Lebaron LV 2448-2	B	3.13
Lebaron LG 24SG1	C	1.56
Lebaron LG 24SG18	D	1.73
Neenah R3405A	E	1.30
Neenah R3405B	F	1.50
Neenah R3405A-Double	G	2.60
Neenah R3405B-Double	H	3.00

4. The Orifice Equation was used to evaluate grate capacity:

$Q = C \times A \times (2gh)1/2 \times f$

where:

Q = Grate Capacity
C = Orifice Coefficient, 0.6
A = Free Open Area of grate in square feet
h = Head over grate in feet
g = Gravity, ft/s^2, 32.2
*f = Clogging Factor, 0.85
*Assumes the catch basin is 15% clogged

Illicit Discharge Statement

ILLICIT DISCHARGE COMPLIANCE STATEMENT

I VERIFY THAT NO ILLICIT DISCHARGES EXIST FROM THE BELL FARM ESTATES DEVELOPMENT. THROUGH THE IMPLEMENTATION OF THE *CONSTRUCTION PERIOD POLLUTION PREVENTION AND SEDIMENTATION AND EROSION CONTROL PLAN* AS WELL AS THE *OPERATION AND MAINTENANCE PLAN*, MEASURES ARE SET FORTH TO PREVENT ILLICIT DISCHARGES FROM ENTERING THE STORMWATER MANAGEMENT DRAINAGE SYSTEM.

SIGNATURE	**PRINT NAME**	**DATE**

TITLE	**COMPANY**

SIGNATURE	**PRINT NAME**	**DATE**

TITLE	**COMPANY**

NOTE: THIS CERTIFICATION MUST BE SIGNED BEFORE STORMWATER IS CONVEYED TO THE PROPOSED STORMWATER DRAINAGE SYSTEM IN ACCORDANCE WITH STANDARD 10 OF THE MASSACHUSETTS STORMWATER MANAGEMENT STANDARDS.

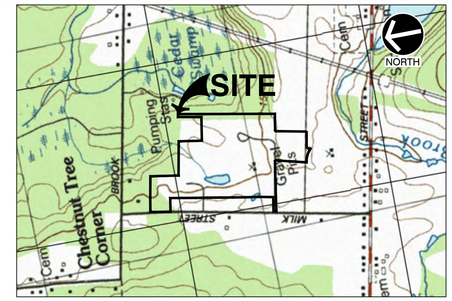
DEFINITIVE SUBDIVISION

"BELL FARM ESTATES"

0 MILK STREET & 0 COUNCIL OAK WAY
ASSESSOR'S MAP 17, LOTS 109, 135, 208
DIGHTON, MASSACHUSETTS

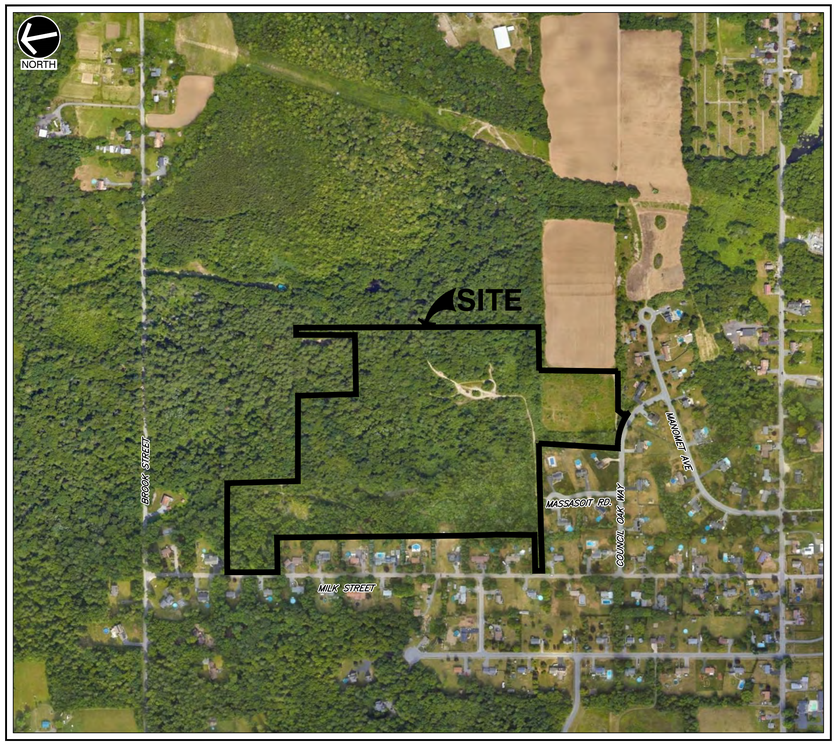
PERMITTING PLANS
FEBRUARY 2025

FOR REGISTRY USE ONLY



VICINITY MAP
SCALE: 1"=1,000'

DRAWING INDEX				
SHEET NUMBER	DRAWING NUMBER	SHEET TITLE	DATE ISSUED	DATE REVISED
1	C000	COVER SHEET	FEBRUARY 2025	
2	C001	GENERAL NOTES	FEBRUARY 2025	
3	C002	GENERAL NOTES	FEBRUARY 2025	
4	C100	EXISTING CONDITIONS KEY MAP	FEBRUARY 2025	
5	C101	EXISTING CONDITIONS PLAN	FEBRUARY 2025	
6	C102	EXISTING CONDITIONS PLAN	FEBRUARY 2025	
7	C103	EXISTING CONDITIONS PLAN	FEBRUARY 2025	
8	C104	EXISTING CONDITIONS PLAN	FEBRUARY 2025	
9	C105	OVERALL EROSION CONTROL PLAN	FEBRUARY 2025	
10	C200	LOTTING KEY MAP	FEBRUARY 2025	
11	C201	LOTTING PLAN	FEBRUARY 2025	
12	C202	LOTTING PLAN	FEBRUARY 2025	
13	C203	LOTTING PLAN	FEBRUARY 2025	
14	C204	LOTTING PLAN	FEBRUARY 2025	
15	C205	EASEMENT PLAN	FEBRUARY 2025	
16	C300	GRADING & DRAINAGE KEY MAP	FEBRUARY 2025	
17	C301	GRADING & DRAINAGE PLAN	FEBRUARY 2025	
18	C302	GRADING & DRAINAGE PLAN	FEBRUARY 2025	
19	C303	GRADING & DRAINAGE PLAN	FEBRUARY 2025	
20	C304	GRADING & DRAINAGE PLAN	FEBRUARY 2025	
21	C500	UTILITY KEY MAP	FEBRUARY 2025	
22	C501	UTILITY PLAN	FEBRUARY 2025	
23	C502	UTILITY PLAN	FEBRUARY 2025	
24	C503	UTILITY PLAN	FEBRUARY 2025	
25	C504	UTILITY PLAN	FEBRUARY 2025	
26	C600	PLAN AND PROFILE	FEBRUARY 2025	
27	C601	PLAN AND PROFILE	FEBRUARY 2025	
28	C602	PLAN AND PROFILE	FEBRUARY 2025	
29	C603	PLAN AND PROFILE	FEBRUARY 2025	
30	C604	PLAN AND PROFILE	FEBRUARY 2025	
31	C800	DETAIL SHEET	FEBRUARY 2025	
32	C801	DETAIL SHEET	FEBRUARY 2025	
33	C802	DETAIL SHEET	FEBRUARY 2025	
34	C803	DETAIL SHEET	FEBRUARY 2025	
35	C804	DETAIL SHEET	FEBRUARY 2025	



SITE MAP
SCALE: 1"=400'

REFERENCE: ORTHORGRAPHIC AERIAL IMAGERY AND MAPS ARE BASED ON GIS DATA OBTAINED FROM MASSGIS PROVIDED BY THE BUREAU OF GEOGRAPHIC INFORMATION (MASSGIS), COMMONWEALTH OF MASSACHUSETTS, EXECUTIVE OFFICE OF TECHNOLOGY AND SECURITY SERVICES.

WAIVERS REQUESTED

SUBDIVISION REGULATIONS:

1. SECTION 3320.b – WAIVE REQUIREMENT FOR A LOCUS MAP AT A SCALE OF ONE (1) INCH EQUALS ONE THOUSAND (1000) FEET SHOWING THE PROPOSED STREETS IN RELATION TO EXISTING STREETS IN THE IMMEDIATE VICINITY, WHERE 1"=400' IS PROPOSED FOR GREATER CLARITY OF THE SITE.
2. SECTION 3320.J – WAIVE REQUIREMENT FOR THE USE OF U.SG.S DATUM AND ALLOW THE USE OF NAVD88 DATUM.
3. SECTION 3320.w – WAIVE REQUIREMENT FOR TEST PITS LOCATION AND LOGS WITNESSED BY THE BOARD OF HEALTH SHALL BE SHOWN WITH NOT LESS THAN TWO (2) PITS PER LOT, WHERE TEST PITS WERE PERFORMED ON A SELECT NUMBER OF LOTS WITNESSED BY THE BOH TO GET A SENSE OF MATERIAL THROUGHOUT THE SITE IN SEPTEMBER AND OCTOBER OF 2022.
4. SECTION 3320.aa – WAIVE REQUIREMENT FOR ENGINEERS ESTIMATE OF MATERIALS WITH QUANTITIES REQUIRED TO CONSTRUCT ROADWAY, UTILITIES AND APPURTENANCES, WHERE THIS WILL BE THE RESPONSIBILITY OF THE DEVELOPER.
5. SECTION 3340 – WAIVE REQUIREMENT FOR DEVELOPMENT IMPACT STATEMENT AS THE PROPOSED USE IS IN HARMONY WITH THE SURROUNDING NEIGHBORHOOD.
6. SECTION 4244 – WAIVE REQUIREMENT THAT PROPOSED CENTERLINE GRADES WITHIN THE RIGHT OF WAY SHALL BE NO MORE THAN FIVE FEET BELOW OR ABOVE EXISTING GRADES WHERE SOME AREAS WITHIN THE RIGHT OF WAY WILL REQUIRE GREATER THAN 5 FEET OF FILL DUE THE GENERAL FLAT TOPOGRAPHY OF THE SITE.
7. SECTION 4325 – WAIVE REQUIREMENT THAT WITHIN THE BASINS, THERE SHALL BE A CHANNEL WITH A ONE PERCENT (1%) GRADE FROM THE INLET(S) TO THE OUTLET, THE CHANNEL LINE BEING EIGHT (8') FOOT WIDE, SIX (6") INCH DEEP CIRCULAR SWALE CONSTRUCTED OF SOD, OR WHEN VELOCITIES DICTATE, SIX (6") INCH TO TWELVE (12") INCHES OF MIXED RIPRAP STONE, WHERE INFILTRATION BASINS ARE PROPOSED AND THE OUTLETS ARE HIGHER THAN THE INLETS AND THE BASIN BOTTOMS ARE FLAT
8. SECTION 4326 – WAIVE REQUIREMENT THAT THE BOTTOM OF THE BASIN SHALL HAVE A TWO PERCENT (2%) (MINIMUM) SLOPE TO THE CHANNEL, WHERE INFILTRATION BASIN ARE PROPOSED AND NO CHANNELS ARE PROPOSED AS THE BASIN BOTTOMS ARE FLAT.
9. SECTION 4327 – WAIVE REQUIREMENT THAT SIDE SLOPES SHALL HAVE A SLOPE OF FIVE (5') FEET HORIZONTAL TO ONE (1') FOOT VERTICAL OR FLATTER AND THE OVERALL SHAPE OF THE BASIN SHALL FIT THE TOPOGRAPHY AS NEARLY AS POSSIBLE WHERE SIDE SLOPES ARE PROPOSED TO BE THREE (3') HORIZONTAL TO ONE (1') FOOT VERTICAL DUE TO SITE CONSTRAINTS.
10. SECTION 4340 – WAIVE REQUIREMENT THAT ALL DRAINS SHALL HAVE A MINIMUM OF THREE (3') FEET COVER, WHERE DRAIN PIPE COVER IS PROPOSED TO BE A MINIMUM OF TWO (2') TO MINIMIZE THE AMOUNT OF FILL REQUIRED FOR THE SUBDIVISION.
11. SECTION 4350 – WAIVE REQUIREMENT OF CATCH BASINS TO BE NOT MORE THAN 250 FEET ON CONTINUOUS GRADES OF THE ROADWAY WHERE UP TO 800 FEET IS PROPOSED DUE TO THE PROPOSED BOX CULVERT FOR THE INTERMITTENT STREAM CROSSING.
12. SECTION 4564 – WAIVE REQUIREMENT THAT TWO MAJOR REAR CORNERS OF EACH LOT SHALL BE MARKED WITH IRON RODS. IRON RODS SHALL BE 3/4 INCH IRON ROD SET TO A DEPTH OF NOT LESS THAN EIGHTEEN (18) INCHES BELOW FINISHED GRADE AND SHALL BE SET FLUSH TO GRADE AS THE REAR CORNERS OF THE PROPOSED LOTS ARE LOCATED WITHIN THE WOODS FOR THE PROPOSED PROJECT ACTIVITIES

VARIANCES REQUESTED

SUBDIVISION REGULATIONS:

1. SECTION 4320 – REQUEST VARIANCE FOR THE USE OF OPEN STORMWATER INFILTRATION FACILITIES WHERE UNDERGROUND INFILTRATION SYSTEMS ARE REQUIRED.

OWNER/TEAM INFORMATION

CIVIL ENGINEER
CIVIL & ENVIRONMENTAL CONSULTANTS, INC.
31 BELLOWS ROAD
RAYNHAM, MA 02767
PH: (774) 501-2176
CONTACT: KARLIS P. SKULTE, P.E.

OWNER/APPLICANT
BELL FARM ESTATES, LLC
843 MAIN STREET
DIGHTON MA, 02715
CONTACT: CARL REBELLO

WETLANDS CONSULTANT
AVAZINIS ENVIRONMENTAL SERVICES INC.
P.O BOX 836
CHARLESTOWN RI, 02813

ZONING TABLE	
ZONING DISTRICT:	RESIDENCE & AGRICULTURE
PROPOSED USE:	SINGLE FAMILY HOUSES
TOTAL AREA OF PARCEL:	1,848,239 S.F. (42.43 AC)
	REQUIRED
MINIMUM LOT AREA (SQ. FT.):	35,000 S.F [1]
MINIMUM FRONTAGE (FT.):	175
MIN. FRONT SETBACK (FT.): (FROM CENTERLINE OF PUBLIC WAY)	55
MINIMUM SIDE YARD (FT.):	15
MINIMUM REAR YARD (FT.):	15
MAXIMUM BUILDING HEIGHT (FT.):	35 (2.5 STORIES)
MINIMUM DISTANCE BETWEEN BLDGS (FT.):	10
MAXIMUM BLDG. LOT COVERAGE:	25%
MAXIMUM HEIGHT OF PROJECTIONS (FT.)	40

[1] PER ZONING BY LAW, LOT AREA IS DEFINED AS "AT LEAST A PIECE OF LAND 30,000 SQ. FT. FOR THE LOT AREA REQUIRED FOR ZONING COMPLIANCE SHALL BE CONTIGUOUS LAND OTHER THAN THAT UNDER ANY WATER BODY, BOG, SWAMP WET MEADOW OR OTHER WETLAND AS DEFINED IN § 40, CHAPTER 131, G.L.

SITE DEVELOPMENT ZONING DATA

ADDRESS:	0 MILK STREET & 0 COUNCIL OAK WAY DIGHTON MA, 02715
PARCEL I.D.:	ASSESSORS MAP 17 LOTS 109, 135, AND 208
DEED REFERENCES:	BOOKS 25569, 27672, 24967 PAGES 87, 115, 24
TOTAL AREA OF SITE:	42.43 ACRES (1,848,239 SQ. FT.)
ZONING DISTRICT:	RESIDENCE & AGRICULTURE
FEMA FLOOD ZONE:	ZONE X (AREA OF MINIMAL FLOOD HAZARD)
PROPOSED USE:	SINGLE FAMILY HOUSES

BENCHMARKS

1. BENCHMARK #1 (BM#1) – CB/DH FND. ELEV.=59.93 AT NORTHERN PROPERTY CORNER OF LOT 17 MAP 203.
2. BENCHMARK #2 (BM#2) – SPIKE SET (TRAV. PNT) EL.=42.4 NEAR NORTHERN PART INTERMITTENT STREAM.
3. BENCHMARK #3 (BM#3) – FRB (NO CAP) EL.=39.67 NEAR EASTERN PROPERTY LINE.
4. BENCHMARK #4 (BM#4) – CB/DH FND. ELEV.=56.26 AT SOUTHERN CORNER OF R.O.W OF MILK ST AND WHITEMARSH LANE.

I CERTIFY THAT SHEETS C000, C001, C002, C200, C201, C202, C203, C204, AND C205 HAVE BEEN PREPARED IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE REGISTRY OF DEEDS.

REGISTERED PROFESSIONAL LAND SURVEYOR

3/3/2025
DATE

Dig Safe Systems, Inc.
1-888-DIG-SAFE
(1-888-344-7233)

COMMONWEALTH OF MASSACHUSETTS
THOMAS W. HARDMAN
NO. 33597
REGISTERED
PROFESSIONAL LAND SURVEYOR

COMMONWEALTH OF MASSACHUSETTS
CHRISTOPHER J. VANDENBERGHE
CIVIL
No. 54907
REGISTERED
PROFESSIONAL ENGINEER
3/3/25

TOWN OF DIGHTON
PLANNING BOARD
APPROVAL UNDER THE SUBDIVISION CONTROL LAW REQUIRED

DATE

REVISION RECORD

NO	DATE	DESCRIPTION

31 Bellows Road
Raynham, MA 02767
Ph: 774.501.2176
www.cecinc.com
Civil & Environmental Consultants, Inc.

BELL FARM ESTATES
ASSESSORS MAP 17
LOTS 135, 109, 208
MILK STREET, DIGHTON, MA

COVER SHEET

DATE:	FEBRUARY 2025	DRAWN BY:	AMB
DWG SCALE:	AS SHOWN	CHECKED BY:	CJV
PROJECT NO:	315-430		DSK
APPROVED BY:			

DRAWING NO.: **C000**
SHEET 1 OF 35

P:\310-000\315-430\-CADD\Dwg\CV01\315430-CV01-C000.dwg|C000| LS:(2/24/2025 - cvandenberghe) - LP: 2/27/2025 10:34 AM

FOR REGISTRY USE ONLY

GENERAL NOTES

1. PROPERTY LINE INFORMATION TAKEN FROM THE PLAN ENTITLED "PLAN OF LAND IN DIGHTON, MA." PREPARED FOR ST. MARK'S REALTY TRUST PREPARED BY EARTH SERVICES CORPORATION, DATED AUGUST 30, 2004 AND RECORDED IN THE BRISTOL COUNTY NORTH REGISTRY OF DEEDS IN PLAN BOOK 429 PAGE 48.
2. THE BASIS OF BEARING IS GRID NORTH DERIVED FROM POST PROCESSING METHODS USING THE NORTH AMERICAN DATUM OF 1983 (2011 ADJUSTMENT) STATE PLANE COORDINATES, MASSACHUSETTS MAINLAND ZONE (FIPSZONE 2001) AND NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88).
3. EXISTING CONTOURS SHOWN COMPILED FROM A FIELD SURVEY PERFORMED BY CIVIL & ENVIRONMENTAL CONSULTANTS INC, IN SEPTEMBER 2022. CONTOURS SHOWN OUTSIDE THE SUBJECT PROPERTY ARE FROM "2021 USGS LIDAR: CENTRAL MASSACHUSETTS" DATASET FROM THE "NOAA DIGITAL COAST: DATA ACCESS VIEWER" PROGRAM DOWNLOADED ON 10/25/2024.
4. WETLAND DELINEATION AS DEPICTED WAS PERFORMED BY AVIZINIS ENVIRONMENTAL SERVICES INC. IN JUNE 2023 AND JUNE 2024 AND APPROVED BY THE DIGHTON CONSERVATION COMMISSION VIA A DECISION ON 09/19/2024 (SE# 017-0489) AND RECORDED IN THE BRISTOL COUNTY REGISTRY OF DEEDS IN PLAN BOOK 29070 PAGE 6.
5. RESOURCE AREA FLAGS SHOWN COMPILED FROM LOCATIONS BY GPS PROVIDED BY AVIZINIS ENVIRONMENTAL SERVICES INC. IN JUNE 2023, JUNE 2024, APRIL & MAY 2024, AND SEPTEMBER 2024.
6. THE SUBJECT PROPERTY IS NOT LOCATED WITHIN A SPECIAL FLOOD HAZARD ZONE AS DELINEATED ON F.E.M.A. FLOOD INSURANCE RATE MAP OF BRISTOL COUNTY, MASSACHUSETTS, PANEL NO. 234 OF 550, MAP NUMBER 25005C0234G, EFFECTIVE JULY 16, 2014.
7. THE SITE IS LOCATED ENTIRELY WITHIN A INTERIM WELLHEAD PROTECTION AREA (ZONE II).
8. SUBJECT PARCEL IS LOCATED IN THE RESIDENCE & AGRICULTURE ZONING DISTRICT.
9. PROPERTY DEED INFORMATION RECORDED IN BRISTOL COUNTY (NORTH) REGISTRY OF DEEDS AS FOLLOWS:
   - MAP 17 LOT 208: BOOK 15569 PAGE 87
   - MAP 17 LOT 109: BOOK 27672 PAGE 115
   - MAP 17 LOT 135: BOOK 24967 PAGE 24
10. EXISTING CONDITIONS AS DEPICTED ON THESE PLANS ARE GENERAL AND ILLUSTRATIVE IN NATURE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO EXAMINE THE SITE AND BE FAMILIAR WITH EXISTING CONDITIONS PRIOR TO BIDDING ON THIS PROJECT. IF CONDITIONS ENCOUNTERED DURING EXAMINATION ARE SIGNIFICANTLY DIFFERENT FROM THOSE SHOWN, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AND CITY OF FALL RIVER IMMEDIATELY.
11. THE UTILITIES SHOWN HEREON HAVE BEEN LOCATED FROM FIELD SURVEY INFORMATION AND/OR EXISTING DRAWINGS. INVERT ELEVATIONS DRAINAGE INFRASTRUCTURE ARE SHOWN BASED ON RECORD INFORMATION AND SHOULD BE CONSIDERED APPROXIMATE. THE SURVEYOR MAKES NO GUARANTEE THAT THE UTILITIES LOCATED HEREON COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UTILITIES LOCATED ARE IN THE EXACT LOCATION INDICATED.
12. THE CONTRACTOR SHALL VERIFY LOCATION AND ELEVATION OF ALL EXISTING UTILITIES (INCLUDING THOSE LABELED PER RECORD DATA) PRIOR TO THE BEGINNING OF CONSTRUCTION OR EARTH MOVING OPERATIONS. INFORM ENGINEER AND CITY OF FALL RIVER OF ANY CONFLICTS DETRIMENTAL TO THE DESIGN INTENT.
13. THE CONTRACTOR SHALL CALL DIGSAFE AT 1-800-322-4844 AT LEAST 72 HOURS, SATURDAYS, SUNDAYS, AND HOLIDAYS EXCLUDED, PRIOR TO EXCAVATING AT ANY LOCATION. A COPY OF THE DIGSAFE PROJECT REFERENCE NUMBER(S) SHALL BE GIVEN TO THE OWNER AND ENGINEER PRIOR TO EXCAVATION.
14. THE CONTRACTOR AND SUBCONTRACTORS SHALL BE RESPONSIBLE FOR COMPLYING WITH APPLICABLE FEDERAL, STATE AND LOCAL REQUIREMENTS, TOGETHER WITH EXERCISING PRECAUTIONS AT ALL TIMES FOR THE PROTECTION OF PERSONS (INCLUDING EMPLOYEES) AND PROPERTY. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND SUBCONTRACTORS TO INITIATE, MAINTAIN AND SUPERVISE ALL SAFETY REQUIREMENTS, PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK.
15. THE CONTRACTOR SHALL INDEMNIFY AND HOLD HARMLESS THE OWNER AND OWNER'S REPRESENTATIVE FOR ANY AND ALL INJURIES AND/OR DAMAGES TO PERSONNEL, EQUIPMENT AND/OR EXISTING FACILITIES OCCURRING IN THE COURSE OF THE DEMOLITION AND CONSTRUCTION DESCRIBED IN THE PLANS AND SPECIFICATIONS.
16. CONTRACTOR SHALL OBTAIN ALL APPLICABLE PERMITS FOR ALL CONSTRUCTION ACTIVITIES IN ACCORDANCE WITH LOCAL, STATE, & FEDERAL REGULATIONS.
17. THE CONTRACTOR SHALL COMPLY WITH ALL LOCAL CODES, OBTAIN ALL APPLICABLE PERMITS, AND PAY ALL REQUIRED FEES PRIOR TO BEGINNING WORK.
18. ANY WORK PERFORMED IN RIGHT OF WAYS SHALL BE IN ACCORDANCE WITH THE APPLICABLE LOCAL OR STATE REQUIREMENTS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO OBTAIN THE NECESSARY PERMITS FOR THE WORK, SCHEDULE NECESSARY INSPECTIONS, AND PROVIDE THE NECESSARY TRAFFIC CONTROL MEASURES AND DEVICES, ETC., FOR WORK PERFORMED IN THE RIGHT OF WAYS.
19. THE CONTRACTOR IS TO PERFORM ALL INSPECTIONS AS REQUIRED BY THE UNITED STATES EPA FOR THE NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) PERMIT AND FURNISH OWNERS REPRESENTATIVE WITH WRITTEN REPORTS.
20. CONTRACTOR SHALL IMPLEMENT ALL SOIL AND EROSION CONTROL PRACTICES IN ACCORDANCE WITH THE EROSION AND SEDIMENT CONTROL PLAN, STORM WATER POLLUTION PREVENTION PLAN AND STATE AND LOCAL REGULATIONS.
21. ALL GROUND SURFACE AREAS THAT HAVE BEEN EXPOSED OR LEFT BARE AS A RESULT OF CONSTRUCTION AND ARE TO FINAL GRADE AND ARE TO REMAIN SO, SHALL BE SEEDED AND MULCHED AS SOON AS PRACTICAL IN ACCORDANCE WITH SPECIFICATIONS. IF NO SPECIFICATIONS ARE SUPPLIED, USE STATE OF MASSACHUSETTS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.
22. ALL CONSTRUCTION DETAILS, MATERIALS, METHODS, AND SPECIFICATIONS SHALL SHALL BE DONE ACCORDING TO SAID SPECIFICATIONS AND IN ACCORDANCE WITH APPLICABLE STANDARDS OF THE TOWN OF DIGHTON.
23. ALL WORK PERFORMED BY THE CONTRACTOR SHALL CONFORM TO THE LATEST REGULATIONS OF THE AMERICANS WITH DISABILITIES ACT AND THE COMMONWEALTH OF MASSACHUSETTS 521 CMR ARCHITECTURAL ACCESS BOARD.
24. THE CONTRACTOR SHALL REFER TO OTHER PLANS WITHIN THIS CONSTRUCTION SET FOR OTHER PERTINENT INFORMATION. IT IS NOT THE ENGINEER'S INTENT THAT ANY SINGLE PLAN SHEET IN THIS SET OF DOCUMENTS FULLY DEPICTS ALL WORK ASSOCIATED WITH THE PROJECT.
25. BEFORE INSTALLATION OF STORM, OR OTHER UTILITY, THE CONTRACTOR SHALL VERIFY ALL CROSSINGS, BY EXCAVATION WHERE NECESSARY, AND INFORM THE OWNER AND THE ENGINEER OF ANY CONFLICTS. THE ENGINEER WILL BE HELD HARMLESS IN THE EVENT HE IS NOT NOTIFIED OF DESIGN CONFLICTS PRIOR TO CONSTRUCTION.
26. SITE SIGNAGE AND STRIPING SHALL BE IN ACCORDANCE WITH THE MASSACHUSETTS MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

WETLAND/ DEMOLITION & EROSION CONTROL NOTES

1. WETLAND DELINEATION AS DEPICTED WAS PERFORMED BY AVIZINIS ENVIRONMENTAL SERVICES INC. IN JUNE 2023 AND JUNE 2024 AND APPROVED BY THE DIGHTON CONSERVATION COMMISSION VIA A DECISION ON 09/19/2024 (SE# 017-0489) AND RECORDED IN THE BRISTOL COUNTY REGISTRY OF DEEDS IN PLAN BOOK 29070 PAGE 6.
2. EROSION CONTROL TO BE INSTALLED PRIOR TO ALL ACTIVITY AND REMAIN IN PLACE UNTIL ALL DISTURBED AREAS HAVE BEEN STABILIZED.
3. CONTRACTOR IS RESPONSIBLE FOR IMPLEMENTING ALL CONSERVATION COMMISSION AND BOARD OF HEALTH DIRECTIVES.
4. EROSION CONTROL MODIFICATIONS CAN ONLY BE MADE WITH WRITTEN CONSERVATION APPROVAL.
5. THE CONSERVATION COMMISSION MUST BE CONTACTED A MINIMUM OF 2 BUSINESS DAYS IN ADVANCE FOR AN EROSION CONTROL AND ANY OTHER APPLICABLE INSPECTIONS.
6. THE NAME AND CONTACT NUMBERS OF THE GENERAL CONTRACTOR MUST BE PROVIDED TO THE ENGINEER AND CONSERVATION COMMISSION PRIOR TO STARTING WORK.
7. CONTRACTOR TO MONITOR, REPAIR AND MODIFY EROSION CONTROL TO ASSURE THAT THERE IS NO WETLAND RESOURCE AREA OR ABUTTER ENCROACHMENT.
8. EROSION CONTROL INSPECTION TO BE PERFORMED BY THE CONSERVATION AGENT PRIOR TO STARTING WORK.
9. A CONSERVATION COMMISSION FINAL GRADING AS-BUILT MUST BE SUBMITTED TO THE CONSERVATION COMMISSION AFTER WORK HAS BEEN COMPLETED.
10. EROSION CONTROL TO REMAIN IN PLACE UNTIL THE SITE IS SUFFICIENTLY STABILIZED AND THE GRASS HAS BEEN INSPECTED AND APPROVED BY THE CONSERVATION COMMISSION.
11. FAILURE TO COMPLY WITH THE CONSERVATION COMMISSION REQUIREMENTS MAY RESULT IN CONTRACTOR OR OWNER FINES.
12. THE DEP AND DIGHTON CONSERVATION COMMISSION FILE NUMBERS MUST BE POSTED ON-SITE PRIOR TO STARTING WORK.
13. A COPY OF THE REGISTRY RECORDED ORDER OF CONDITIONS MUST BE ON SITE AT ALL TIME DURING WORK.
14. NO TREES SHALL BE REMOVED, NOR VEGETATION DISTURBED BEYOND THE LIMITS OF CONSTRUCTION WITHOUT THE EXPRESS WRITTEN APPROVAL OF THE OWNER'S REPRESENTATIVE OR THE CONSERVATION COMMISSION.
15. PROTECTION OF EXISTING TREES AND VEGETATION: PROTECT EXISTING TREES AND OTHER VEGETATION INDICATED TO REMAIN IN PLACE AGAINST UNNECESSARY CUTTING, BREAKING OR SKINNING OF ROOTS, SKINNING OR BRUISING OF BARK, SMOTHERING OF TREES BY STOCKPILING CONSTRUCTION MATERIALS OR EXCAVATED MATERIALS WITHIN DRIP LINE, EXCESS FOOT OR VEHICULAR TRAFFIC, OR PARKING OF VEHICLES WITHIN DRIP LINE. PROVIDE TEMPORARY GUARDS TO PROTECT TREES AND VEGETATION TO BE LEFT STANDING.
16. EROSION & SEDIMENT CONTROL MEASURES AROUND AREAS OF DEMOLITION SHALL BE PROPERLY INSTALLED, APPROVED AND FUNCTION PROPERLY PRIOR TO INITIATION OF DEMOLITION ACTIVITIES.
17. CONTRACTOR SHALL ADHERE TO ALL LOCAL, STATE, FEDERAL AND OSHA REGULATIONS DURING ALL DEMOLITION ACTIVITIES.
18. CONTRACTOR SHALL PROTECT ALL CORNER PINS, MONUMENTS, PROPERTY CORNERS AND BENCHMARKS DURING DEMOLITION ACTIVITIES. IF DISTURBED, CONTRACTOR SHALL HAVE DISTURBED ITEMS RESET BY A LICENSED SURVEYOR AT NO ADDITIONAL COST TO THE OWNER.
19. THE CONTRACTOR SHALL USE SUITABLE METHODS TO CONTROL DUST AND DIRT CAUSED BY THE DEMOLITION ACTIVITIES.

LAYOUT NOTES

1. THE CONTRACTOR SHALL CHECK EXISTING GRADES, DIMENSIONS, AND INVERTS IN THE FIELD AND REPORT ANY DISCREPANCIES TO THE OWNER'S REPRESENTATIVE PRIOR TO BEGINNING WORK.
2. THE CONTRACTOR SHALL VERIFY THE EXACT LOCATION, TYPE AND ELEVATION OF ALL EXISTING UTILITIES, INCLUDING IRRIGATION LINES, AND SHALL TAKE CARE TO PROTECT UTILITIES THAT ARE TO REMAIN. THE CONTRACTOR SHALL RELOCATE EXISTING UTILITIES AS INDICATED OR AS NECESSARY FOR CONSTRUCTION.
3. THE CONTRACTOR SHALL PROVIDE A SMOOTH TRANSITION BETWEEN EXISTING PAVEMENT AND NEW PAVEMENT. FIELD ADJUSTMENT OF FINAL GRADES MAY BE NECESSARY. THE CONTRACTOR SHALL INSTALL ALL UTILITIES, INCLUDING IRRIGATION SLEEVING, PRIOR TO THE INSTALLATION OF PAVED SURFACES.
4. ALL DAMAGE TO EXISTING PAVEMENT TO REMAIN WHICH RESULTS FROM THE CONTRACTOR'S OPERATIONS SHALL BE REPLACED WITH EQUIVALENT MATERIALS AT THE CONTRACTOR'S EXPENSE.
5. SITE DIMENSIONS SHOWN ARE TO THE FACE OF CURB OR EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.
6. CONTRACTOR SHALL MAINTAIN ONE SET OF AS-BUILT / RECORD DRAWINGS ON-SITE DURING CONSTRUCTION FOR DISTRIBUTION TO THE OWNER AND/OR OWNER'S REPRESENTATIVE UPON COMPLETION.
7. THIS SITE LAYOUT IS SPECIFIC TO THE APPROVALS NECESSARY FOR THE CONSTRUCTION IN ACCORDANCE WITH THE TOWN OF DIGHTON. NO CHANGES TO THE SITE LAYOUT ARE ALLOWED WITHOUT THE WRITTEN APPROVAL OF THE ENGINEER. CHANGES MADE TO THE SITE LAYOUT WITHOUT APPROVAL IS SOLELY THE RESPONSIBILITY OF THE CONTRACTOR. CHANGES INCLUDE BUT ARE NOT LIMITED TO, INCREASED IMPERVIOUS PAVEMENT, MOVEMENT OF CURB LINES, CHANGES TO DRAINAGE STRUCTURES AND PATTERNS, CHANGES TO LANDSCAPING, ETC

CONSTRUCTION OPERATION AND MAINTENANCE PLAN

1. CONTRACTOR TO REFER CONSTRUCTION SEDIMENTATION AND EROSION CONTROL PLAN PROVIDED UNDER SEPARATE COVER FOR SEDIMENT AND EROSION CONTROL REQUIREMENTS. THE LIST BELOW SERVES TO PROVIDE A SUMMARY, BUT NOT ALL OF THE SEDIMENT AND EROSION CONTROL PRACTICES.
2. THIS OPERATION AND MAINTENANCE PLAN SHALL BE PERFORMED BY THE GENERAL CONTRACTOR DURING CONSTRUCTION OPERATIONS AND BY THE OWNER ONCE THE FACILITIES ARE COMPLETED AND PUT INTO OPERATION (SEE THE O&M PLANS INCLUDED IN THE PROJECTS STORMWATER REPORT FOR MORE DETAILED INFORMATION INCLUDING CONSTRUCTION SCHEDULE).
3. PERSONNEL ASSOCIATED WITH THE CONSTRUCTION OF THIS PROJECT SHALL BE INFORMED THAT THE MAINTENANCE OF SILTATION CONTROLS TAKES PRECEDENCE OVER NORMAL CONSTRUCTION ACTIVITIES. ADJACENT PROPERTIES AND STREETS SHALL BE PROTECTED FROM EROSION OR SILTATION CONDITIONS.
4. INSPECTION AND MAINTENANCE, AS OUTLINED HEREIN, SHALL BE PERFORMED FOUR TIMES WITHIN THE FIRST YEAR OF OPERATION. THENCE, INSPECTIONS AND MAINTENANCE SHALL BE CONDUCTED ON A SEMIANNUAL BASIS (2 TIMES A YEAR.) AND AFTER ALL LARGE STORMS WITH A RAINFALL GREATER THAN ONE HALF (½"). AN INSPECTION REPORT SHALL BE MAINTAINED.
5. ACCUMULATED DEBRIS IN THE INFILTRATION BASINS SHALL BE REMOVED BEFORE IT EXCEEDS 0.5 FEET IN DEPTH AND DISPOSED OF PROPERLY.
6. A VISUAL INSPECTION SHALL BE MADE OF ALL STORMWATER MANAGEMENT SYSTEM COMPONENTS FOR THE ENTIRE STORM DRAINAGE SYSTEM. THE GENERAL CONDITION OF THESE STRUCTURES SHOULD BE REVIEWED AND ACCUMULATED DEBRIS SHALL BE REMOVED. THE CONDITION OF ALL OUTLETS SHALL BE NOTED AND A DESCRIPTION OF THE DRAINAGE STRUCTURES SHALL BE INCLUDED IN THE REPORT. DELETERIOUS MATERIALS SHALL BE REMOVED FROM THESE STRUCTURES AND THE DRAINAGE CHANNELS IN ORDER FOR THE SYSTEM TO FUNCTION PROPERLY.
7. ALL OUTLETS, DRAINING CHANNELS, AND SLOPES SHALL BE KEPT FREE OF DEBRIS AND STABILIZED. ANY EROSION SHALL BE REPAIRED IMMEDIATELY.
8. ACCUMULATED SEDIMENT SHALL BE REMOVED FROM THE INFILTRATION BASINS BEFORE IT EXCEEDS 0.5' IN DEPTH, OR AT LEAST ONCE EVERY 5 YEARS. THE LOW FLOW OUTLET SHALL BE CLEANED AND INSPECTED FOR PROPER FUNCTIONING. BASIN AND VEGETATED FILTER STRIP SLOPES SHALL BE MAINTAINED WITH A GRASS STAND OF AT LEAST 3". GRASS SHALL BE MOWED AT LEAST FOUR TIMES A YEAR AND CLIPPINGS SHALL NOT BE LEFT IN BASIN OR ON THE FILTER STRIP. ANY TREES OR OTHER WOODY VEGETATION GROWING IN EMBANKMENTS OR NEAR OUTLET STRUCTURES SHALL BE REMOVED.
9. THE INLET AND OUTLET FOR THE CROSS CULVERT CROSSING AT STA 23+50 FROM LOT 16 TO LOT 14 IS TO BE KEPT CLEAR OF DEBRIS AND THE GRASS AROUND IT MAINTAINED REGULARLY TO AVOID OVERGROWTH.
10. DUST CONTROL WILL BE IMPLEMENTED VIA THE USE OF WATER TRUCKS AS NEEDED ONCE SITE GRADING HAS BEEN INITIATED AND DURING WINDY CONDITIONS WHILE SITE GRADING IS OCCURRING. SPRAYING OF POTABLE WATER AT A RATE OF 300 GALLONS PER ACRE OR LESS WILL BE PERFORMED BY A MOBILE PRESSURE-TYPE DISTRIBUTOR TRUCK NO MORE THAN THREE TIMES A DAY DURING THE MONTHS OF MAY-SEPTEMBER AND ONCE PER DAY DURING THE MONTHS OF OCTOBER-APRIL OR WHENEVER THE DRYNESS OF THE SOIL WARRANTS IT.
11. THE FOLLOWING MINIMUM INFORMATION SHALL BE RECORDED:
    - DATE OF INSPECTION
    - GENERAL CONDITION OF THE ENTIRE SYSTEM
    - CORRECTIVE MAINTENANCE ACTIONS TAKEN TO ENSURE ADEQUATE FUNCTION AND WHEN PERFORMED.
    - A COPY OF THESE INSPECTION REPORTS SHALL BE FURNISHED TO THE APPROPRIATE AGENCY UPON REQUEST.

NO BUILDING OR STRUCTURE SHALL BE BUILT OR PLACED UPON ANY LOT WITHOUT A PERMIT FROM THE BOARD OF HEALTH.

I CERTIFY THAT THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE REGISTRY OF DEEDS.

REGISTERED PROFESSIONAL LAND SURVEYOR

3/3/2025
DATE

TOWN OF DIGHTON
PLANNING BOARD
APPROVAL UNDER THE SUBDIVISION CONTROL LAW REQUIRED

DATE

COMMONWEALTH OF MASSACHUSETTS
CHRISTOPHER J VANDENBERGHE
CIVIL
No. 54507
REGISTERED PROFESSIONAL ENGINEER
3/3/25

COMMONWEALTH OF MASSACHUSETTS
THOMAS W. HARDMAN
NO. 33597
REGISTERED PROFESSIONAL LAND SURVEYOR

REVISION RECORD

NO	DATE	DESCRIPTION

31 Bellows Road
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Ph: 774.501.2176
www.cecinc.com
Civil & Environmental Consultants, Inc.

BELL FARM ESTATES
ASSESSOR'S MAP 17
LOTS 135, 109, 208
MILK STREET, DIGHTON, MA

GENERAL NOTES

DATE:	FEBRUARY 2025	DRAWN BY: AMB
DWG SCALE:	AS SHOWN	CHECKED BY: CJV
PROJECT NO.:		315-430
APPROVED BY:		DSK

DRAWING NO.:
C001
SHEET 2 OF 35

P:\310-000\315-430\-CADD\Dwg\CIVD7\315430-CIV01-C001.dwg[C001] LS:(2/24/2025 - cvandenberghe) - LP: 2/27/2025 9:03 AM

FOR REGISTRY USE ONLY

GRADING NOTES

1. ALL PROPOSED GRADES SHOWN ARE FINISH GRADES, TOP OF GROUND LEVEL, TOP OF PAVEMENT, OR GRATE ELEVATION, UNLESS NOTED OTHERWISE.
2. CONTRACTOR SHALL STRICTLY ADHERE TO THE EROSION & SEDIMENT CONTROL PLAN PREPARED FOR THIS PROJECT.
3. EARTHWORK SHALL INCLUDE CLEARING AND GRUBBING, STRIPPING AND STOCKPILING TOPSOIL, MASS GRADING, EXCAVATION, FILLING, UNDER CUT AND REPLACEMENT, IF REQUIRED, AND COMPACTION.
4. CONTRACTOR TO PLACE TOPSOIL OVER THE SUBGRADE OF UNPAVED, DISTURBED AREAS TO A DEPTH INDICATED ON THE LANDSCAPE PLANS (6" MINIMUM), UNLESS NOTED OTHERWISE.
5. ALL SLOPES IN NON–PAVED AREAS SHALL BE 3:1 (HORIZONTAL:VERTICAL) MAXIMUM UNLESS NOTED OTHERWISE.
6. ALL AREAS NOT PAVED SHALL BE STABILIZED IN ACCORDANCE WITH THE EROSION & SEDIMENT CONTROL PLAN, UNLESS NOTED OTHERWISE.
7. ALL EXCESS SOIL MATERIALS SHALL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS NOTED OTHERWISE. EXCESS SOIL MATERIALS SHALL BE REMOVED BY THE CONTRACTOR AND DISPOSED OF OFFSITE AT NO ADDITIONAL COST TO THE OWNER IN ACCORDANCE WITH ALL LOCAL AND STATE CODES AND PERMIT REQUIREMENTS.

STORM DRAINAGE NOTES

1. ALL CONSTRUCTION SHALL COMPLY WITH THE TOWN OF DIGHTON DEPARTMENT OF PUBLIC WORKS CONSTRUCTION SPECIFICATIONS & STANDARD DETAILS, LATEST REVISION, AND IF APPLICABLE, THE LATEST EDITION OF THE MASSACHUSETTS DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS.
2. DISTANCES SHOWN ON PIPING ARE HORIZONTAL DISTANCES FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE, UNLESS NOTED OTHERWISE.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH THE INSTALLATION, INSPECTION, TESTING AND FINAL ACCEPTANCE OF ALL NEW STORMWATER MANAGEMENT FACILITIES. CONTRACTOR SHALL COORDINATE WITH ALL APPLICABLE REGULATING AGENCIES CONCERNING INSTALLATION, INSPECTION AND APPROVAL OF THE STORM DRAINAGE SYSTEM CONSTRUCTION.
4. ALL STORMWATER MANAGEMENT FACILITIES, INCLUDING COLLECTION AND CONVEYANCE STRUCTURES, SHALL BE INSTALLED IN ACCORDANCE WITH ALL APPLICABLE LOCAL AND STATE CODES AND REGULATIONS.
5. THE CONTRACTOR IS TO CONSTRUCT CURBS, CATCH BASINS, PIPING AND CONNECTIONS ETC. AS REQUIRED TO CONVEY THE PAVED SURFACE DRAINAGE TO THE INFILTRATION BASINS.
6. ALL CATCH BASINS AND MANHOLES WITH A DEPTH GREATER THAN 4' SHALL BE PROVIDED WITH STEPS. STEPS SHALL MEET THE REQUIREMENTS OF THE LATEST EDITION OF THE MASSACHUSETTS DEPARTMENT OF TRANSPORTATION STADARD SPECIFICATIONS.
7. STORM PIPE LABELED "ST" SHALL BE REINFORCED CONCRETE PIPE (RCP). ALL STORM PIPE IS TO BE INSTALLED PER TOWN OF DIGHTON SPECIFICATIONS.
8. TRENCHES SHALL BE SHAPED TO GIVE THE PIPE A CONTINUOUS AND EVEN BEARING. WHERE THE BOTTOM OF THE TRENCH HAS BEEN TAKEN OUT TO A GREATER DEPTH THAN ABOVE SPECIFIED, IT SHALL BE REFILLED WITH EARTH, PROPERLY COMPACTED AND SHAPED. THE CONTRACTOR SHALL UNDERCUT UNSUITABLE MATERIAL AND REPLACE IT WITH SUITABLE MATERIAL. BEDDING SHALL BE COMPRISED OF A 6" LAYER OF ¾"– 1½" INCH CRUSHED STONE FOR PROPER SUPPORT AND PROTECTION FROM SETTLING.

UTILITY NOTES

1. THE CONTRACTOR SHALL OBTAIN ALL REQUIRED PERMITS PRIOR TO COMMENCEMENT OF CONSTRUCTION.
2. ALL CONSTRUCTION SHALL COMPLY WITH THE TOWN OF DIGHTON DEPARTMENT OF PUBLIC WORKS CONSTRUCTION SPECIFICATIONS & STANDARD DETAILS, LATEST REVISION.
3. ALL PROPOSED UTILITY LINES AND EXTENSIONS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE PRIVATE UTILITY COMPANY SPECIFICATIONS. CONTRACTOR SHALL COORDINATE UTILITY DISCONNECTIONS WITH THE APPROPRIATE AGENCY.
4. THE CONTRACTOR IS PARTICULARLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF THE EXISTING UTILITIES SHOWN HEREON IS BASED ON TOPOGRAPHIC SURVEYS AND RECORD DRAWINGS. THE CONTRACTOR SHALL NOT RELY UPON THIS INFORMATION AS BEING EXACT OR COMPLETE. SHOULD UNCHARTED UTILITIES BE ENCOUNTERED DURING EXCAVATION OPERATIONS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AS SOON AS POSSIBLE FOR INSTRUCTIONS. THE CONTRACTOR SHALL CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION AND REQUEST FIELD VERIFICATION OF UTILITY LOCATIONS. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO RELOCATE EXISTING UTILITIES CONFLICTING WITH IMPROVEMENTS SHOWN HEREON IN ACCORDANCE WITH ALL LOCAL, STATE, AND FEDERAL REGULATIONS GOVERNING SUCH OPERATIONS.
5. MAINTAIN MINIMUM 10–FOOT HORIZONTAL SEPARATION BETWEEN ON–SITE SEPTICS AND WATER SERVICES LINE TO EACH LOT, UNLESS NOTED OTHERWISE.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING THE SEQUENCING OF CONSTRUCTION FOR ALL UTILITY LINES SO THAT WATER LINES, GAS LINES, AND UNDERGROUND ELECTRIC DO NOT CONFLICT WITH SANITARY SEWERS OR STORM SEWERS. INSTALL UTILITIES PRIOR TO PAVEMENT CONSTRUCTION.
7. ALL TRENCH SPOILS SHALL BECOME THE PROPERTY OF THE CONTRACTOR UNLESS OTHERWISE DESIGNATED SHALL BE REMOVED BY THE CONTRACTOR AND DISPOSED OF OFFSITE AT NO ADDITIONAL COST TO THE OWNER IN ACCORDANCE WITH ALL LOCAL AND STATE CODES AND PERMIT REQUIREMENTS.
8. FOUNDATION DRAINS AND ALL OTHER CLEAR WATER CONNECTIONS TO THE SEPTIC SYSTEMS ARE PROHIBITED.
9. CONTRACTOR SHALL ADJUST ALL EXISTING UTILITY SURFACE FEATURES INCLUDING BUT NOT LIMITED TO CASTINGS, VALVE BOXES, PEDESTALS, CLEANOUTS, ETC. TO MATCH PROPOSED FINISHED GRADES, UNLESS NOTED OTHERWISE.
10. THE CONTRACTOR SHALL PROVIDE RECORD DRAWINGS OF ALL IMPROVEMENTS. DRAWINGS SHALL INCLUDE AT LEAST TWO DIMENSIONS TO EACH VALVE AND MANHOLE FROM KNOWN SITE FEATURES. DRAWINGS SHALL INCLUDE HORIZONTAL AND VERTICAL INFORMATION ON ALL NEW UTILITIES AS WELL AS EXISTING UTILITIES ENCOUNTERED.
11. ALL WATER SERVICE PIPE SIZES 3" THRU 12" SHALL BE DUCTILE IRON PIPE CLASS 52 PIPE PER LOCAL JURISDICTION, FROM WATER MAIN THRU METER SETTING(S) INCLUDING THE METER BYPASS.
12. ALL WATER SERVICE PIPES FOR LOTS SHALL BE 1" AND DIGHTON WATER DISTRICT APPROVED PLASTIC WATER SERVICE TUBING WITH A MINIMUM OF 200 POUNDS PER SQUARE INCH RATING.
13. WATERLINE TRENCH WIDTH AT THE TOP OF THE PIPE SHALL BE NO WIDER THAN THE OUTSIDE DIAMETER OF THE PIPE, PLUS 1.5 FEET, UNLESS PERMISSION IS GRANTED BY THE INSPECTOR. THE TRENCH ABOVE THE TOP OF THE PIPE SHALL HAVE SUFFICIENT SLOPE SO THAT THE BANKS WILL NOT SLIDE. SHEETING/SHORING OF TRENCHES SHALL BE THE CONTRACTOR'S RESPONSIBILITY AND AS MAY BE REQUIRED BY APPLICABLE GOVERNMENTAL LAWS AND REGULATIONS.EXCAVATION FOR MANHOLES, CATCH BASINS, HEADWALLS OR OTHER STRUCTURES SHALL BE SUFFICIENT TO LEAVE AT LEAST 12 INCHES IN THE CLEAR BETWEEN THEIR OUTER SURFACES AND THE EMBANKMENT OR TIMBER WHICH MAY BE USED TO HOLD AND PROTECT THE BANKS. ANY OVERDEPTH EXCAVATION BELOW THE FOOTINGS OF SUCH STRUCTURES SHALL BE FILLED WITH CONCRETE OR AS DIRECTED BY THE TOWN ENGINEER AND WILL BE AT THE CONTRACTOR'S EXPENSE. CARE MUST BE TAKEN NOT TO DAMAGE WATER PIPES, STORM DRAINS, SANITARY SEWERS, GAS MAINS, ELECTRIC CONDUITS, OR OTHER STRUCTURES ENCOUNTERED ON THE LINES OF THE WORK. IN CASE OF DAMAGE TO ANY STRUCTURES, THE OWNER OF THE STRUCTURES AND THE DEPARTMENT OF PUBLIC WORKS SHALL BE NOTIFIED IMMEDIATELY BY THE CONTRACTOR SO THAT THE PROPER STEPS MAY BE TAKEN TO REPAIR, AT THE EXPENSE OF THE CONTRACTOR, ANY AND ALL DAMAGE DONE.
14. FINAL STAMPED AS–BUILT PLAN, IN BOTH HARD COPY AND DIGITAL FORMAT, SHALL BE SUBMITTED TO THE TOWN OF DIGHTON DPW ENGINEERING DIVISION AND APPROVED 30 DAYS AFTER COMPLETION AND PRIOR TO ANY SIGN OFFS OR OCCUPANCY.

NO BUILDING OR STRUCTURE SHALL BE BUILT OR PLACED UPON ANY LOT WITHOUT A PERMIT FROM THE BOARD OF HEALTH.

TABLE OF ABBREVIATIONS

ABAN	ABANDON	HW	HEADWALL
ACR	ACCESSIBLE CURB RAMP	HYD	HYDRANT
ADA	AMERICANS WITH DISABILITIES ACT	I=	INVERT ELEVATION
ADJ	ADJUST	INF	INFILTRATION
APPROX	APPROXIMATE	INV	INVERT ELEVATION
ARCH	ARCHITECTURAL	LA	LANDSCAPE AREA
BC	BOTTOM OF CURB	LOD	LIMIT OF DISTURBANCE
BCB	BITUMINOUS CONCRETE BERM	LOW	LIMIT OF WORK
BCC	BITUMINOUS CONCRETE CURB	LP	LOW POINT
BIT	BITUMINOUS	MAX	MAXIMUM
BLDG	BUILDING	MCCME	MATCH EXISTING
BOT	BOTTOM	MES	METAL END SECTION
BS	BOTTOM OF SLOPE	MIN	MINIMUM
BW	BOTTOM OF WALL	NDZ	NO DISTURB ZONE
BWLL	BROKEN WHITE LANE LINE	NTS	NOT TO SCALE
CATV	CABLE TV	OHW	OVERHEAD WIRE
CCB	CAPE COD BERM	PB	PULL BOX
CIP	CAST IRON PIPE	PCC	PRECAST CONCRETE CURB
CLF	CHAIN LINK FENCE	PIV	POST INDICATOR VALVE
CO	CLEANOUT	PL	PROPERTY LINE
CONC	CONCRETE	PROP	PROPOSED
COND	CONDUIT	PVC	POLYVINYLCHLORIDE PIPE
CS	CURB STOP AND BOX	R	RADIUS
DCB	DOUBLE CATCH BASIN	R&D	REMOVE AND DISPOSE
DET	DETENTION	R&R	REMOVE AND RESET
DIA	DIAMETER	R&S	REMOVE AND SALVAGE
DIP	DUCTILE IRON PIPE	R=	RIM ELEVATION
DMH	DRAIN MANHOLE	RA	RIVERFRONT AREA
DPW	DEPARTMENT OF PUBLIC WORKS	RCP	REINFORCED CONCRETE PIPE
DW	DOMESTIC WATER	RD	ROOF DRAIN
DYCL	DOUBLE YELLOW CENTER LINE	REM	REMOVE
ELEV	ELEVATION	RET	RETAIN
EMH	ELECTRIC MANHOLE	ROW	RIGHT–OF–WAY
EOP	EDGE OF PAVEMENT	SAS	SOIL ABSORPTION SYSTEM
EX	EXISTING	SCB	SINGLE CATCH BASIN
EXIST	EXISTING	SGE	SLOPED GRANITE EDGING
F&C	FRAME AND COVER	SLP	SITE LIGHT POLE
F&G	FRAME AND GRATE	SMH	SEWER MANHOLE
FA	FIRE ALARM	SWEL	SOLID WHITE EDGE LINE
FDN	FOUNDATION	SWLL	SOLID WHITE LANE LINE
FES	FLARED END SECTION	SYS	SYSTEM
FFE	FIRST FLOOR ELEVATION	TC	TOP OF CURB
FM	FORCE MAIN	TMH	TELEPHONE MANHOLE
FO	FIBER OPTICS	TR	TS TOP OF SLOPE
FP	FIRE PROTECTION	TSV	TAPPING SLEEVE, VALVE, AND BOX
FRB	FOUND REBAR	TW	TOP OF WALL
GG	GAS GATE	TYP	TYPICAL
GI	GUTTER INLET	UD	UNDERDRAIN
GM	GAS METER	UG	UNDERGROUND
GRAN	GRANITE	UP	UTILITY POLE
GT	GREASE TRAP	VGC	VERTICAL GRANITE CURB
GTD	GRADE TO DRAIN	WM	WATER METER
HDPE	HIGH DENSITY POLYETHYLENE PIPE	WQI	WATER QUALITY INLET
HH	HAND HOLE	WQU	WATER QUALITY UNIT
HP	HIGH POINT	WV	WATER VALVE AND BOX

I CERTIFY THAT THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE REGISTRY OF DEEDS.

REGISTERED PROFESSIONAL LAND SURVEYOR

3/3/2025
DATE

TOWN OF DIGHTON
PLANNING BOARD
APPROVAL UNDER THE SUBDIVISION CONTROL LAW REQUIRED

DATE

COMMONWEALTH OF MASSACHUSETTS
CHRISTOPHER J VANDENBERGHE
CIVIL
No. 54907
REGISTERED PROFESSIONAL ENGINEER
3/3/25

COMMONWEALTH OF MASSACHUSETTS
THOMAS W. HARDMAN
NO. 33597
REGISTERED PROFESSIONAL LAND SURVEYOR

REVISION RECORD

NO	DATE	DESCRIPTION

31 Bellows Road
Raynham, MA 02767
Ph: 774.501.2176
www.cecinc.com
Civil & Environmental Consultants, Inc.

BELL FARM ESTATES
ASSESSOR'S MAP 17
LOTS 135, 109, 208
MILK STREET, DIGHTON, MA

GENERAL NOTES

DATE:	FEBRUARY 2025	DRAWN BY: AMB
DWG SCALE:	AS SHOWN	CHECKED BY: CJV
PROJECT NO.:		315-430
APPROVED BY:		DSK

DRAWING NO.:
C002
SHEET 3 OF 35

P:\310-000\315-430\CADD\Dwg\CIV01\315430-CV01-C001.dwg[C002] LS:(2.24/2025 - cvandenberghe) - LP: 2/27/2025 9:03 AM

SEE SHEET C102

SEE SHEET C103

SEE SHEET C101

SEE SHEET C104

MAP 17
LOT 136
N/F
TOWN OF SOMERSET

MAP 17
LOT 109A
N/F
TOWN OF DIGHTC

MAP 17
LOT 215
N/F
J. & GRADY

NORTH

ASSESSOR'S
PARCEL ID 17-109
TOTAL AREA = 5.0± AC.

VERNAL POOL
PER TOWN OF
DIGHTON
CONSERVATION
BY-LAW

FRESHWATER WETLAND

VERNAL POOL

MAP 17
LOT 136
N/F
TOWN OF DIGHTON

MAP 17
LOT 209-14
N/F
JOHN R. &
TRICIA L. COUTURE

MAP 17
LOT 209-13
N/F
RAYMOND J. &
SANDRA ROSARIO

ASSESSOR'S
PARCEL ID 17-135
TOTAL AREA = 4.36± AC.

BORDERING
VEGETATED
WETLAND

INTERMITTENT STREAM

ASSESSOR'S
PARCEL ID 17-208
TOTAL AREA = 32.97± AC.

25' NO TOUCH

FRESHWATER
WETLAND

COUNCIL OAK WAY
(PUBLIC-40' WIDE)

MAP 17
LOT 209-3
N/F
TIMOTHY & SUSAN
TOOLIN

MAP 17
LOT 209-4
N/F
MICHAEL K. &
MICHELLE L. AGRESTI

MAP 17
LOT 209-5
N/F
ROBERT G. &
CARLA A. CEURVELS

MAP 17
LOT 209-6
N/F
COUNCIL OAK
ESTATES TRUST

MAP 17
LOT 141
N/F
TOWN OF SOMERSET

POND

PROP. D.I. WETLAND
REPLICATION = 5,000 SF
(SEE DETAIL SHEET C802)

BORDERING
VEGETATED
WETLAND

MASSASOIT
ROAD

MAP 17
LOT 207
N/F
PAUL R. &
JUDITH A. JOLY

MAP 17
LOT 209-2
N/F
NICHOLAS &
ALAINA ST. GERMAIN

BORDERING
VEGETATED
WETLAND

INTERMITTENT STREAM

MAP 17
LOT 293
N/F
JAMES GARCIA

MAP 17
LOT 306
N/F
GWEN R. REYNOLDS

MAP 17
LOT 305
N/F
DAVID B. &
MELISSA A. ROGERS

MAP 17
LOT 312
N/F
JENNIFER L. CABRAL

MAP 17
LOT 313
N/F
RAYMOND L. &
JUDITH M. LACHANCE
& SARAH K. DUSSEAULT

MAP 17
LOT 316
N/F
JAMES R. &
KAREN S. WILKINSON

MAP 17
LOT 311
N/F
CURRAN V. BUCO &
JESSICA FONTAINE

MAP 17
LOT 310
N/F
COLLEEN M. LEWIS

MAP 17
LOT 314
N/F
MICHAEL J. GIUVA

MAP 17
LOT 323
N/F
SHANE I. &
CELESTE M. WHITEHOUSE

MILK (PUBLIC-50' WIDE) STREET

MAP 16
LOT 133
BLOCK 1
N/F
JEFFERY & ARRUDA SIMOES

MAP 16
LOT 133
BLOCK 2
N/F
WILLIAM III AND MARCY COWELL

MAP 16
LOT 118
N/F
JEFFERY & ELIZABETH CLOONAN

MAP 16
LOT 117
N/F
JAMES & ELIZABETH MOREIERA

MAP 16
LOT 120
N/F
SHEILA BEAUSOLEIL

MAP 16
LOT 124
N/F
KERLY & PIERRE LOUBEAU

MAP 16
LOT 63
N/F
KENNETH & CHRISTINE PACHECO IRREV. TRUST

MAP 16
LOT 125
N/F
PEDRO JR & SANDRA CABRAL

MAP 16
LOT 126
N/F
GAILES FAMILY REVOCABLE TRUST

MAP 16
LOT 127
N/F
MARC & JESSICA TAVARES

WHITEMARSH
LANE

NOTE:

1. REFER TO SHEETS C001, C002, C101-C105 FOR ADDITIONAL NOTES.

SCALE IN FEET
0 80 160

COMMONWEALTH OF MASSACHUSETTS
THOMAS W. HARDMAN
NO. 33597
REGISTERED PROFESSIONAL SURVEYOR

COMMONWEALTH OF MASSACHUSETTS
CHRISTOPHER J VANDENBERGHE
CIVIL
No. 54007
REGISTERED PROFESSIONAL ENGINEER
3/3/25

TOWN OF DIGHTON
PLANNING BOARD
APPROVAL UNDER THE SUBDIVISION
CONTROL LAW REQUIRED

DATE

REVISION RECORD

NO	DATE	DESCRIPTION

CEC
Civil & Environmental Consultants, Inc.
31 Bellows Road
Raynham, MA 02767
Ph: 774.501.2176
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BELL FARM ESTATES
ASSESSOR'S MAP 17
LOTS 135, 109, 208
MILK STREET, DIGHTON, MA

EXISTING CONDITIONS KEY MAP

DATE:	FEBRUARY 2025	DRAWN BY:	AMB
DWG SCALE:	1" = 80'	CHECKED BY:	CJV
PROJECT NO.:			315-430
APPROVED BY:			DSK

DRAWING NO.:
C100
SHEET 4 OF 35

P:\310-000\315-430\-CADD\Dwg\CVD1\315430-CVD1-C100.dwg[C100] LS:(2/27/2025 - cvandenberghe) - LP: 2/27/2025 9:03 AM

NORTH

MAP 17
LOT 141
N/F
TOWN OF SOMERSET

FOUND STONE BOUND

MATCHLINE C102

MATCHLINE C104

MAP 17
LOT 207
N/F
PAUL R. & JUDITH A. JOLY

POND

BORDERING VEGETATED WETLAND

ISOLATED WETLAND

MAP 17
LOT 203
N/F
JAMES GARCIA

INTERMITTENT STREAM

MAP 17
LOT 306
N/F
GWEN R. REYNOLDS

MAP 17
LOT 305
N/F
DAVID B. & MELISSA A. ROGERS

MAP 17
LOT 312
N/F
JENNIFER L. CABRAL

MAP 17
LOT 313
N/F
RAYMOND L. & JUDITH M. LACHANCE & SARAH K. DUSSEAULT

CONCRETE BOUND W/ DRILL HOLE

BENCHMARK (BM#1)
CB/DH FND
ELEV.: 59.93' (NAVD88)

MILK (PUBLIC-50' WIDE) STREET

MAP 16
LOT 133
BLOCK 1
N/F
JEFFERY & ARRUDA SIMOES

MAP 16
LOT 133
BLOCK 2
N/F
WILLIAM III AND MARCY COWELL

MAP 16
LOT 118
N/F
JEFFERY & ELIZABETH CLOONAN

MAP 16
LOT 117
N/F
JAMES & ELIZABETH MOREIERA

MAP 16
LOT 120
N/F
SHEILA BEAUSOLEIL

MAP 16
LOT 124
N/F
KERLY & PIERRE LOUB

LEGEND

- EXISTING SUBJECT PROPERTY LINE
- EXISTING EASEMENT
- EXISTING RIGHT-OF-WAY
- 100 EXISTING INDEX (MAJOR) CONTOUR
- 99 EXISTING INTERMEDIATE (MINOR) CONTOUR
- EXISTING FEMA FLOOD ZONE
- A1 EXISTING WETLAND LINE
- 25BZ 25-FT NO-TOUCH
- 50BZ 50-FT NO STRUCTURE
- 100BZ 100-FT WETLAND BUFFER ZONE LINE
- EXISTING ROADWAY CENTERLINE
- EXISTING EDGE OF PAVEMENT
- EXISTING STRUCTURE
- W EXISTING WATER LINE
- OH-E EXISTING OVERHEAD WIRE
- EXISTING FIRE HYDRANT
- EXISTING TREE LINE
- WV EXISTING WATER VALVE
- EXISTING WATER SHUT OFF/WATER GATE
- EXISTING DRAIN MANHOLE
- EXISTING CATCH BASIN
- EXISTING UTILITY POLE
- WETLAND
- WATERBODY
- LIMIT OF VERNAL POOL

NOTES:

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6. SUBJECT PARCEL IS LOCATED IN THE RESIDENCE & AGRICULTURE ZONING DISTRICT.
7. THE SITE IS LOCATED ENTIRELY WITHIN A INTERIM WELLHEAD PROTECTION AREA (ZONE II).
8. REFER TO SHEETS C001 AND C002 FOR ADDITIONAL NOTES.

SCALE IN FEET
0 40 80

COMMONWEALTH OF MASSACHUSETTS
THOMAS W. HARDMAN
NO. 33597
REGISTERED
PROFESSIONAL LAND SURVEYOR

COMMONWEALTH OF MASSACHUSETTS
CHRISTOPHER J. VANDENBERGHE
CIVIL
No. 54907
REGISTERED
PROFESSIONAL ENGINEER
3/3/25

TOWN OF DIGHTON
PLANNING BOARD
APPROVAL UNDER THE SUBDIVISION CONTROL LAW REQUIRED

DATE

REVISION RECORD

NO	DATE	DESCRIPTION

31 Bellows Road
Raynham, MA 02767
Ph: 774.501.2176
www.cecinc.com

Civil & Environmental Consultants, Inc.

BELL FARM ESTATES
ASSESSOR'S MAP 17
LOTS 135, 109, 208
MILK STREET, DIGHTON, MA

EXISTING CONDITIONS PLAN

DATE:	FEBRUARY 2025	DRAWN BY: AMB
DWG SCALE:	1" = 40'	CHECKED BY: CJV
PROJECT NO:		315-430
APPROVED BY:		DSK

DRAWING NO.:
C101
SHEET 5 OF 35

P:\310-000\315-430\-CADD\Dwg\CV01\315430-CV01-C100.dwg[C101] LS:(2/27/2025 - cvandenberghe) - LP: 2/27/2025 9:03 AM

NORTH

CONCRETE BOUND W/ DRILL HOLE

FOUND REBAR W/ CAP

MAP 17
LOT 138
N/F
TOWN OF SOMERSET

MATCHLINE C103

FOUND REBAR

BENCHMARK (BM#3)
FRB (NO CAP)
ELEV.: 39.67' (NAVD88)

VERNAL POOL PER TOWN OF DIGHTON CONSERVATION BY-LAW

FRESHWATER WETLAND

VERNAL POOL

FOUND STONE BOUND

IRON ROD FOUND

BORDERING VEGETATED WETLAND

INTERMITTENT STREAM

BENCHMARK (BM#2)
SPIKE SET (TRAV. PNT)
ELEV.: 42.40' (NAVD88)

MATCHLINE C101

MAP 17
LOT 141
N/F
TOWN OF SOMERSET

NOTES:

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- EXISTING UTILITY POLE
- WETLAND
- WATERBODY
- LIMIT OF VERNAL POOL

SCALE IN FEET
0 40 80

REVISION RECORD

NO	DATE	DESCRIPTION

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Civil & Environmental Consultants, Inc.

BELL FARM ESTATES
ASSESSOR'S MAP 17
LOTS 135, 109, 208
MILK STREET, DIGHTON, MA

COMMONWEALTH OF MASSACHUSETTS
THOMAS W. HARDMAN
NO. 33597
REGISTERED PROFESSIONAL LAND SURVEYOR

COMMONWEALTH OF MASSACHUSETTS
CHRISTOPHER J VANDENBERGHE
CIVIL
No. 54907
REGISTERED PROFESSIONAL ENGINEER
3/3/25

TOWN OF DIGHTON
PLANNING BOARD
APPROVAL UNDER THE SUBDIVISION CONTROL LAW REQUIRED

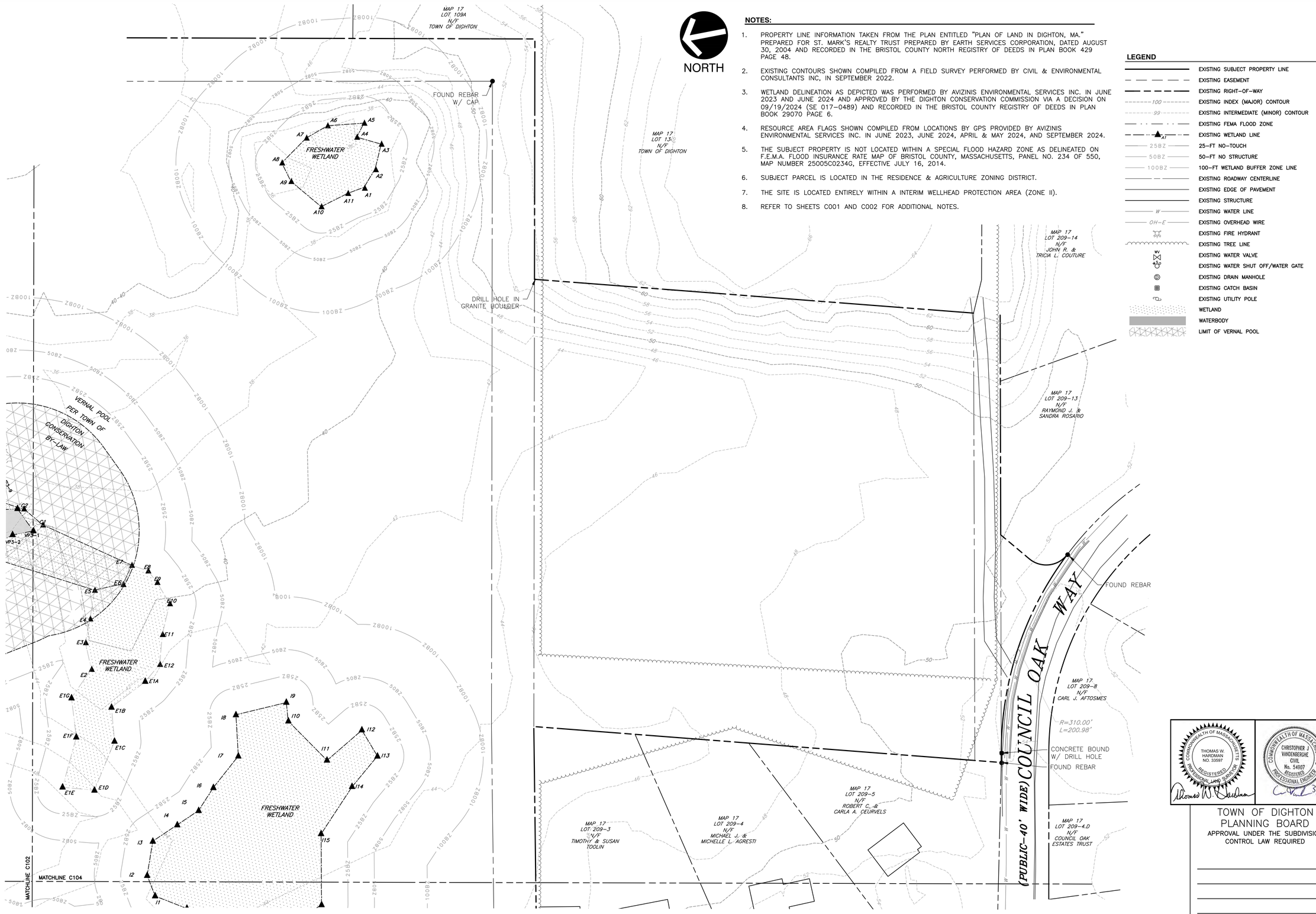
DATE

EXISTING CONDITIONS PLAN

DATE:	FEBRUARY 2025	DRAWN BY: AMB
DWG SCALE:	1" = 40'	CHECKED BY: CJV
PROJECT NO:		315-430
APPROVED BY:		DSK

DRAWING NO.:
C102
SHEET 6 OF 35

P:\310-0001\315-430\-CADD\Dwg\CIVIL\315430-CIV01-C100.dwg[C102] LS:(2/27/2025 - cvandenberghe) - LP: 2/27/2025 9:03 AM



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- D EXISTING DRAIN MANHOLE
- EXISTING CATCH BASIN
- EXISTING UTILITY POLE
- WETLAND
- WATERBODY
- LIMIT OF VERNAL POOL

THOMAS W. HARDMAN NO. 33597 REGISTERED PROFESSIONAL LAND SURVEYOR COMMONWEALTH OF MASSACHUSETTS

CHRISTOPHER VANDENBERGHE CIVIL No. 54907 REGISTERED PROFESSIONAL ENGINEER COMMONWEALTH OF MASSACHUSETTS 3/3/25

TOWN OF DIGHTON
PLANNING BOARD
APPROVAL UNDER THE SUBDIVISION CONTROL LAW REQUIRED

DATE

REVISION RECORD

NO	DATE	DESCRIPTION

31 Bellows Road
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Ph: 774.501.2176
www.cecinc.com

Civil & Environmental Consultants, Inc.

BELL FARM ESTATES
ASSESSOR'S MAP 17
LOTS 135, 109, 208
MILK STREET, DIGHTON, MA

EXISTING CONDITIONS PLAN

DATE:	FEBRUARY 2025	DRAWN BY:	AMB
DWG SCALE:	1" = 40'	CHECKED BY:	CJV
PROJECT NO.:			315-430
APPROVED BY:			DSK

DRAWING NO.:
C103
SHEET 7 OF 35

P:\310-000\315-430\-CADD\Dwg\CIV01\315430-CIV01-C100.dwg(C103) LS:(2/27/2025 - cvandenberghe) - LP: 2/27/2025 9:03 AM

NORTH

LEGEND

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- EXISTING TREE LINE
- EXISTING WATER VALVE
- EXISTING WATER SHUT OFF/WATER GATE
- EXISTING DRAIN MANHOLE
- EXISTING CATCH BASIN
- EXISTING UTILITY POLE
- WETLAND
- WATERBODY
- LIMIT OF VERNAL POOL

MATCHLINE C103

25' NO TOUCH

POND

BORDERING VEGETATED WETLAND

MAP 17 LOT 209-50 N/F COUNCIL OAK ESTATES TRUST

MASSAS(ROAD

MAP 17 LOT 209-2 N/F NICHOLAS & ALAINA ST. GERMAIN

MAP 17 LOT 313 N/F RAYMOND L. & JOHN M. LACHANCE SARAH K. DUSSEAULT

MAP 17 LOT 316 N/F JAMES R. & KAREN S. WILKINSON

MAP 17 LOT 311 N/F CURRAN V. BUCO & JESSICA FONTAINE

MAP 17 LOT 310 N/F COLLEEN M. LEWIS

MAP 17 LOT 314 N/F MICHAEL J. GIUVA

MAP 17 LOT 323 N/F SHANE T. & CELESTE M. WHITEHOUSE

MILK (PUBLIC-50' WIDE) STREET

MATCHLINE C101

MAP 16 LOT 124 N/F KERLY & PIERRE LOUBEAU

MAP 16 LOT 63 N/F KENNETH & CHRISTINE PACHECO IRREV. TRUST

MAP 16 LOT 129 N/F PEDRO JR & SANDRA CABRAL

WHITEMARSH LANE

BENCHMARK (BM#4)
CB/DH FND
ELEV.: 56.26' (NAVD88)

CONCRETE BOUND W/ DRILL HOLE

FOUND REBAR W/ CAP

FOUND REBAR

MAP 16 LOT 128 N/F GAILES FAMILY REVOCABLE TRUST

MAP 16 LOT 127 N/F MARC & JESSICA TAVARES

NOTES:

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SCALE IN FEET
0 40 80

COMMONWEALTH OF MASSACHUSETTS
THOMAS W. HARDMAN NO. 33597
REGISTERED PROFESSIONAL LAND SURVEYOR

COMMONWEALTH OF MASSACHUSETTS
CHRISTOPHER J VANDENBERGHE CIVIL No. 54907 REGISTERED PROFESSIONAL ENGINEER
3/3/25

TOWN OF DIGHTON
PLANNING BOARD
APPROVAL UNDER THE SUBDIVISION CONTROL LAW REQUIRED

DATE

REVISION RECORD

NO	DATE	DESCRIPTION

Civil & Environmental Consultants, Inc.
31 Bellows Road
Raynham, MA 02767
Ph: 774.501.2176
www.cecinc.com

BELL FARM ESTATES
ASSESSORS MAP 17
LOTS 135, 109, 208
MILK STREET, DIGHTON, MA

EXISTING CONDITIONS PLAN

DATE:	FEBRUARY 2025	DRAWN BY: AMB
DWG SCALE:	1" = 40'	CHECKED BY: CJV
PROJECT NO:		315-430
APPROVED BY:		DSK

DRAWING NO.:
C104
SHEET 8 OF 35

P:\310-000\315-430\-CADD\Dwg\CV01\315430-CV01-C100.dwg[C104] LS:(2/27/2025 - cvandenberghe) - LP: 2/27/2025 9:03 AM

NORTH

PROP. TEMP. STOCKPILE AREA
CONCRETE WASHOUT PIT
PROPOSED TREE CLEARING AREA=16.3± ACRES
INSTALL INLET PROTECTION (TYP.)
PROP. 3' DEEP SEDIMENT TRAPS
PROP. TEMP DE-WATERING PUMPING AREA
PROP. 3' DEEP SEDIMENT TRAP
STABILIZED CONSTRUCTION EXIT (SEE DETAIL)
ROAD C (50' R.O.W.)
ROAD B (50' R.O.W.)
ROAD A (50' R.O.W.)
COUNCIL OAK WAY (PUBLIC-40' WIDE)
R=310.00'
L=200.98'
MASSASOIT ROAD
MILK (PUBLIC-50' WIDE) STREET
WHITEWASH LANE
PROP. TREE LINE/ LIMIT OF WORK
VERNAL POOL
FRESHWATER WETLAND
BORDERING VEGETATED WETLAND
POND
LOT 1
LOT 2
LOT 3
LOT 4
LOT 5
LOT 6
LOT 7
LOT 8
LOT 9
LOT 10
LOT 11
LOT 12
LOT 13
LOT 14
LOT 15
LOT 16
LOT 17
LOT 18
LOT 19
LOT 20
LOT 21
LOT 22
LOT 23
LOT 24
LOT 25
LOT 26

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- EXISTING WATER SHUT OFF/WATER GATE
- EXISTING DRAIN MANHOLE
- EXISTING CATCH BASIN
- EXISTING UTILITY POLE
- WETLAND
- WATERBODY
- LIMIT OF VERNAL POOL
- PROPOSED LIMITS OF DISTURBANCE
- FS PROPOSED EROSION CONTROL BARRIER (FILTER SOCK)
- PROPOSED INLET PROTECTION
- STABILIZED CONSTRUCTION EXIT
- LIMIT OF TREE CLEARING

SCALE IN FEET
0 40 80

THOMAS W. HARDMAN NO. 33597 REGISTERED PROFESSIONAL LAND SURVEYOR
COMMONWEALTH OF MASSACHUSETTS

CHRISTOPHER VANDENBERGHE CIVIL No. 54907 REGISTERED PROFESSIONAL ENGINEER
COMMONWEALTH OF MASSACHUSETTS
3/3/25

TOWN OF DIGHTON
PLANNING BOARD
APPROVAL UNDER THE SUBDIVISION CONTROL LAW REQUIRED

DATE

REVISION RECORD

NO	DATE	DESCRIPTION

31 Bellows Road
Raynham, MA 02767
Ph: 774.501.2176
www.cecinc.com
Civil & Environmental Consultants, Inc.

BELL FARM ESTATES
ASSESSOR'S MAP 17
LOTS 135, 109, 208
MILK STREET, DIGHTON, MA

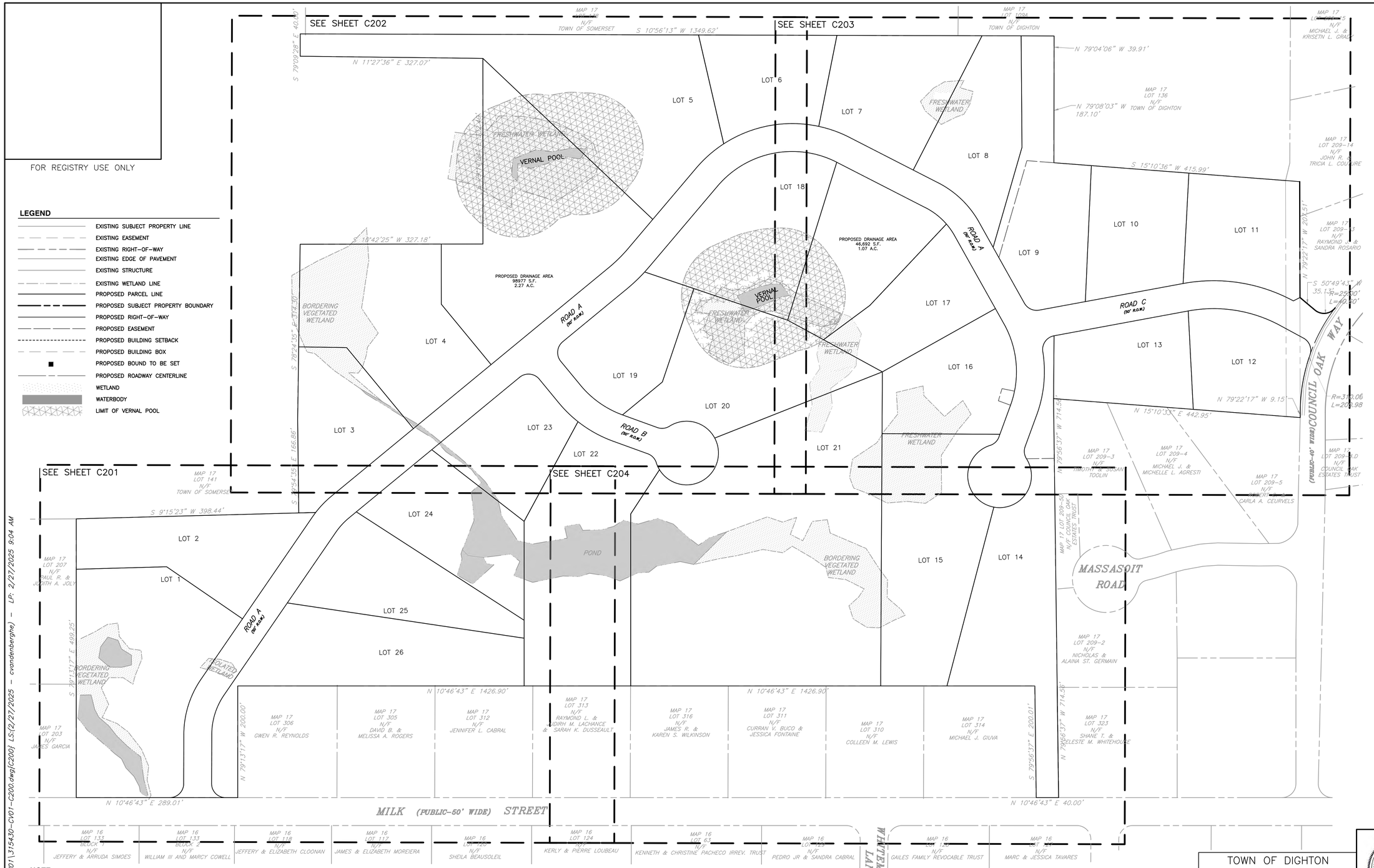
OVERALL EROSION CONTROL PLAN

DATE:	FEBRUARY 2025
DWG SCALE:	1" = 80'
PROJECT NO:	315-430
DRAWN BY:	AMB
CHECKED BY:	CJV
APPROVED BY:	DSK

DRAWING NO.: **C105**
SHEET 9 OF 35

P:\310-000\315-430\-C4D\Dwg\CV01\315430-CV01-C100.dwg(C105) LS:(2/27/2025 - cvandenberghe) - LP: 2/27/2025 9:04 AM

FOR REGISTRY USE ONLY



LEGEND

- EXISTING SUBJECT PROPERTY LINE
- EXISTING EASEMENT
- EXISTING RIGHT-OF-WAY
- EXISTING EDGE OF PAVEMENT
- EXISTING STRUCTURE
- EXISTING WETLAND LINE
- PROPOSED PARCEL LINE
- PROPOSED SUBJECT PROPERTY BOUNDARY
- PROPOSED RIGHT-OF-WAY
- PROPOSED EASEMENT
- PROPOSED BUILDING SETBACK
- PROPOSED BUILDING BOX
- PROPOSED BOUND TO BE SET
- PROPOSED ROADWAY CENTERLINE
- WETLAND
- WATERBODY
- LIMIT OF VERNAL POOL

NOTE:

1. REFER TO SHEETS C001, C002, C201-C205 FOR ADDITIONAL NOTES.

I CERTIFY THAT THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE REGISTRY OF DEEDS.

REGISTERED PROFESSIONAL LAND SURVEYOR

3/3/2025
DATE

TOWN OF DIGHTON
PLANNING BOARD
APPROVAL UNDER THE SUBDIVISION CONTROL LAW REQUIRED

DATE

COMMONWEALTH OF MASSACHUSETTS
CHRISTOPHER J. VANDENBERGHE
CIVIL
No. 54907
REGISTERED PROFESSIONAL ENGINEER
3/3/25

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BELL FARM ESTATES
ASSESSOR'S MAP 17
LOTS 135, 109, 208
MILK STREET, DIGHTON, MA

LOTTING KEY MAP

DATE:	FEBRUARY 2025	DRAWN BY: AMB
DWG SCALE:	1" = 80'	CHECKED BY: CJV
PROJECT NO:		315-430
APPROVED BY:		DSK

DRAWING NO.:
C200
SHEET 10 OF 35

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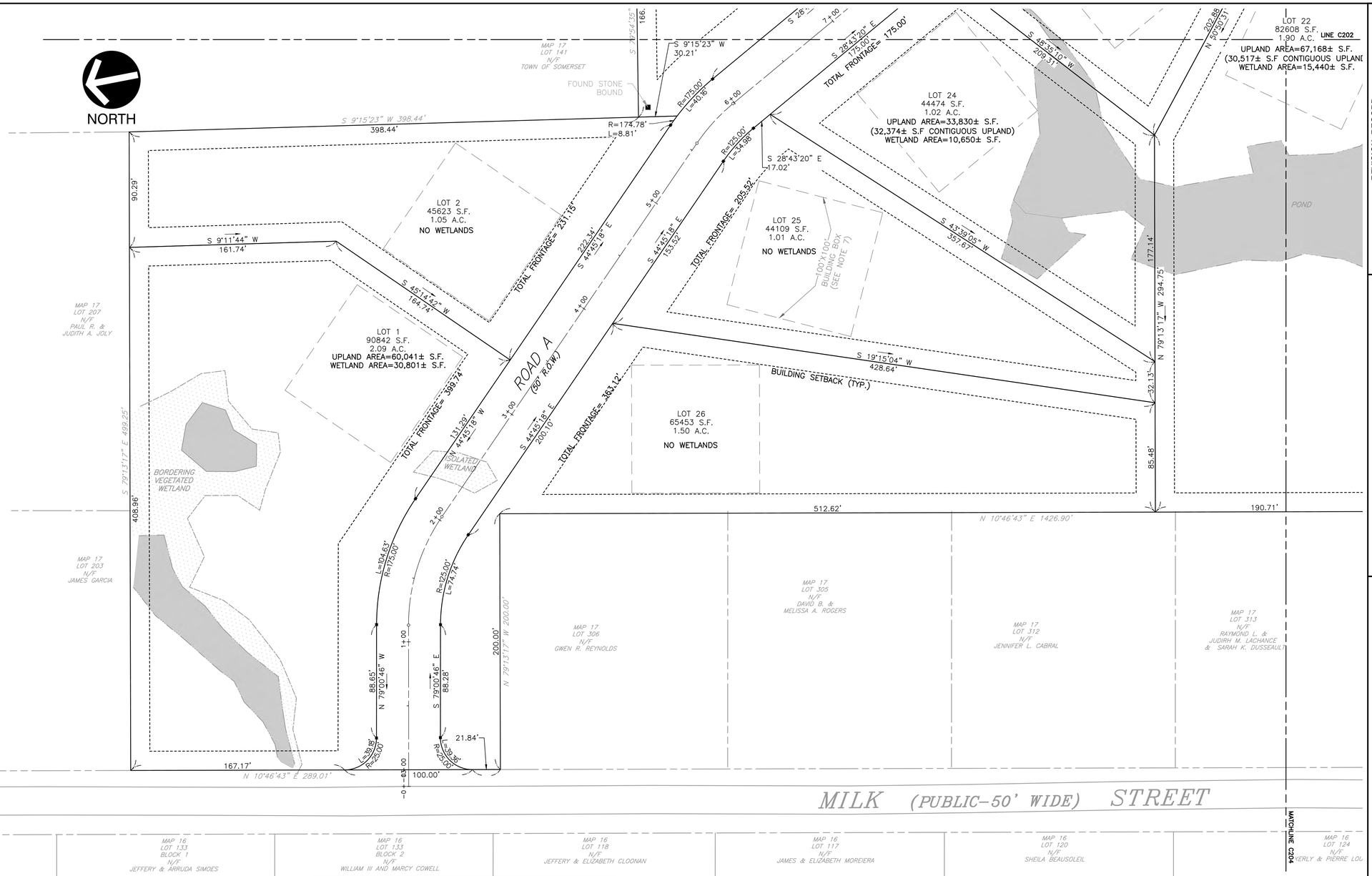
FOR REGISTRY USE ONLY

NORTH

LEGEND

- EXISTING SUBJECT PROPERTY LINE
- EXISTING EASEMENT
- EXISTING RIGHT-OF-WAY
- EXISTING EDGE OF PAVEMENT
- EXISTING STRUCTURE
- EXISTING WETLAND LINE
- PROPOSED PARCEL LINE
- PROPOSED SUBJECT PROPERTY BOUNDARY
- PROPOSED RIGHT-OF-WAY
- PROPOSED EASEMENT
- PROPOSED BUILDING SETBACK
- PROPOSED BUILDING BOX
- PROPOSED BOUND TO BE SET
- PROPOSED ROADWAY CENTERLINE
- WETLAND
- WATERBODY
- LIMIT OF VERNAL POOL



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ZONING TABLE	
ZONING DISTRICT:	RESIDENCE & AGRICULTURE
PROPOSED USE:	SINGLE FAMILY HOUSES
TOTAL AREA OF PARCEL:	1,848,239 S.F. (42.43 AC)
	REQUIRED
MINIMUM LOT AREA (SQ. FT.):	35,000 S.F [1]
MINIMUM FRONTAGE (FT.):	175
MIN. FRONT SETBACK (FT.): (FROM CENTERLINE OF PUBLIC WAY)	55
MINIMUM SIDE YARD (FT.):	15
MINIMUM REAR YARD (FT.):	15
MAXIMUM BUILDING HEIGHT (FT.):	35 (2.5 STORIES)
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MAXIMUM BLDG. LOT COVERAGE:	25%
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Thomas W. Hardman
REGISTERED PROFESSIONAL LAND SURVEYOR

3/3/2025
DATE

TOWN OF DIGHTON
PLANNING BOARD
APPROVAL UNDER THE SUBDIVISION CONTROL LAW REQUIRED

DATE

COMMONWEALTH OF MASSACHUSETTS
CHRISTOPHER VANDENBERGHE
CIVIL
No. 54907
REGISTERED PROFESSIONAL ENGINEER
3/3/25

COMMONWEALTH OF MASSACHUSETTS
THOMAS W. HARDMAN
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REVISION RECORD

NO	DATE	DESCRIPTION

31 Bellows Road
Raynham, MA 02767
Ph: 774.501.2176
www.cecinc.com

Civil & Environmental Consultants, Inc.

BELL FARM ESTATES
ASSESSORS MAP 17
LOTS 135, 109, 208
MILK STREET, DIGHTON, MA

LOTTING PLAN

DATE:	FEBRUARY 2025
DRAWN BY:	AMB
DWG SCALE:	1" = 40'
CHECKED BY:	CJV
PROJECT NO:	315-430
APPROVED BY:	DSK

DRAWING NO.:
C201
SHEET 11 OF 35

P:\310-000\315-430\-CADD\Dwg\CV01\315430-CV01-C200.dwg(C201) LS:(2/27/2025 - cvandenberghe) -- LP: 2/27/2025 9:04 AM

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MAP 17
LOT 138
N/F
TOWN OF SOMERSET

CONCRETE BOUND W/ DRILL HOLE

FOUND REBAR W/ CAP

S 78°09'28" E 40.00'

N 79°09'28" W
40.00'

S 11°27'36" W 327.07'
N 11°27'36" E 327.07'

712.97'

S 10°56'13" W 1,349.62'

247.78'

MATCHLINE C203

FOUND REBAR

LOT 5
98614 S.F.
2.26 A.C.
UPLAND AREA=96,664± S.F.
WETLAND AREA=1,950± S.F.

N 81°47'13" E
260.09'

LOT 6
35491 S.F.
0.81 A.C.
NO WETLANDS

TOTAL FRONTAGE= 177.59'

R=225.00'
L=177.59'

16+00

17+00

L=234.87'
R=175.00'

TOTAL FRONTAGE= 436.52'

LOT 18
59216 S.F.
1.36 A.C.
UPLAND AREA=53,896± S.F.
WETLAND AREA=5,320± S.F.

296.15'
S 61°15'42" E

FRESHWATER WETLAND

VERNAL POOL

332.40'
S 54°14'41" W
419.03'

TOTAL FRONTAGE= 186.18'

R=225.00'
L=165.63'

120.35'
S 36°59'15" E

15+00

14+00

N 36°59'15" W
188.43'

68.08'
N 36°59'15" W

LINE TO BE REMOVED

FOUND STONE BOUND

S 10°42'25" W 327.18'

252.54'

74.64'

IRON ROD FOUND

R=275.00'
L=49.27'

13+00

R=325.00'
L=13.22'

PARCEL "A"
PROPOSED DRAINAGE AREA
98977 S.F.
2.27 A.C.

S 79°17'35" E
107.79'

L=45.01'
R=325.00'

S 29°25'04" W
93.00'

VERNAL POOL

N 29°25'04" E
177.09'

FRESHWATER WETLAND

12+00

N 28°43'20" W
272.81'

ROAD A
(50' R.O.W.)

N 28°43'20" W
147.84'

11+00

TOTAL FRONTAGE= 380.58'

L=39.27'
R=25.00'

S 61°16'40" W
55.22'

176.61'
N 60°34'56" W

LOT 19
35554 S.F.
0.82 A.C.
NO WETLANDS

LOT 20
61585 S.F.
1.41 A.C.
UPLAND AREA=48,980± S.F.
(47,270± S.F CONTIGUOUS UPLAND)
WETLAND AREA=12,605± S.F.

BORDERING VEGETATED WETLAND

S 78°24'35" E 314.30'

183.84'

85.77'
N 11°35'25" E

140.03'
N 61°16'40" E

LOT 4
69948 S.F.
1.61 A.C.
UPLAND AREA=46,455± S.F.
(44,430± CONTIGUOUS UPLAND)
WETLAND AREA=23,493± S.F.

TOTAL FRONTAGE= 180.14'

10+00

0+00

R=25.00'
L=39.27'

S 61°16'40" W
55.22'

1+00

R=175.00'
L=93.24'

92.52'
N 28°43'20" W

S 30°44'57" W
66.22'

R=25.00'
L=22.88'

TOTAL FRONTAGE= 183.02'

R=57.00'
L=93.92'

S 10°47'02" E
322.69'

130.46'

BUILDING SETBACK (TYP.)

188.01'
N 61°16'40" E

180.14'
S 28°43'20" E

9+00

S 28°43'20" E
203.85'

TOTAL FRONTAGE= 346.28'

LOT 3
38676 S.F.
0.89 A.C.
UPLAND AREA=33,450± S.F.
WETLAND AREA=5,226± S.F.

LOT 23
35190 S.F.
0.81 A.C.
UPLAND AREA=34,290± S.F.
(32,860± CONTIGUOUS UPLAND)
WETLAND AREA=900± S.F.

R=225.00'
L=47.94'

R=225.00'
L=7.95'

S 30°44'57" W
66.22'

ROAD B
(50' R.O.W.)

6" CONC. BOUND
WITH DRILL HOLE
TO BE SET (TYP.)

3+00

4+00

TOTAL FRONTAGE= 175.00'

R=57.00'
L=13.96'

R=67.00'
L=75.51'

TOTAL FRONTAGE= 175.51'

LOT 22
82608 S.F.
1.90 A.C.
UPLAND AREA=67,168± S.F.
(30,517± S.F CONTIGUOUS UPLAND)
WETLAND AREA=15,440± S.F.

LOT 21
204266 S.F.
4.69 A.C.
UPLAND AREA=168,767± S.
(74,430± S.F CONTIGUOUS UPL
WETLAND AREA=36,525± S.F

209.86'
N 50°30'51" W

94.62'
N 45°09'03" W

166.86'
S 74°54'35" E 166.86'
N/F

MATCHLINE C201

MAP 17
LOT 141
N/F
TOWN OF SOMERSET

FOUND STONE BOUND

S 9°15'23" W
30.21'

R=175.00'
L=40.16'

6+00

S 28°43'20" E
175.00'

TOTAL FRONTAGE= 175.00'

7+00

190.77'
S 28°43'20" E

8+00

S 48°35'10" W
209.31'

LOT 24
44474 S.F.

LEGEND

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3/3/2025
DATE

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APPROVAL UNDER THE SUBDIVISION CONTROL LAW REQUIRED

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CHRISTOPHER J VANDENBERGHE
CIVIL
No. 54907
REGISTERED PROFESSIONAL ENGINEER
3/3/25

COMMONWEALTH OF MASSACHUSETTS
THOMAS W. HARDMAN
NO. 33597
REGISTERED PROFESSIONAL LAND SURVEYOR

REVISION RECORD

NO	DATE	DESCRIPTION

31 Bellows Road
Raynham, MA 02767
Ph: 774.501.2176
www.cecinc.com

Civil & Environmental Consultants, Inc.

BELL FARM ESTATES
ASSESSOR'S MAP 17
LOTS 135, 109, 208
MILK STREET, DIGHTON, MA

LOTTING PLAN

DATE:	FEBRUARY 2025	DRAWN BY:	AMB
DWG SCALE:	1" = 40'	CHECKED BY:	CJV
PROJECT NO:			315-430
APPROVED BY:			DSK

DRAWING NO.:
C202
SHEET 12 OF 35

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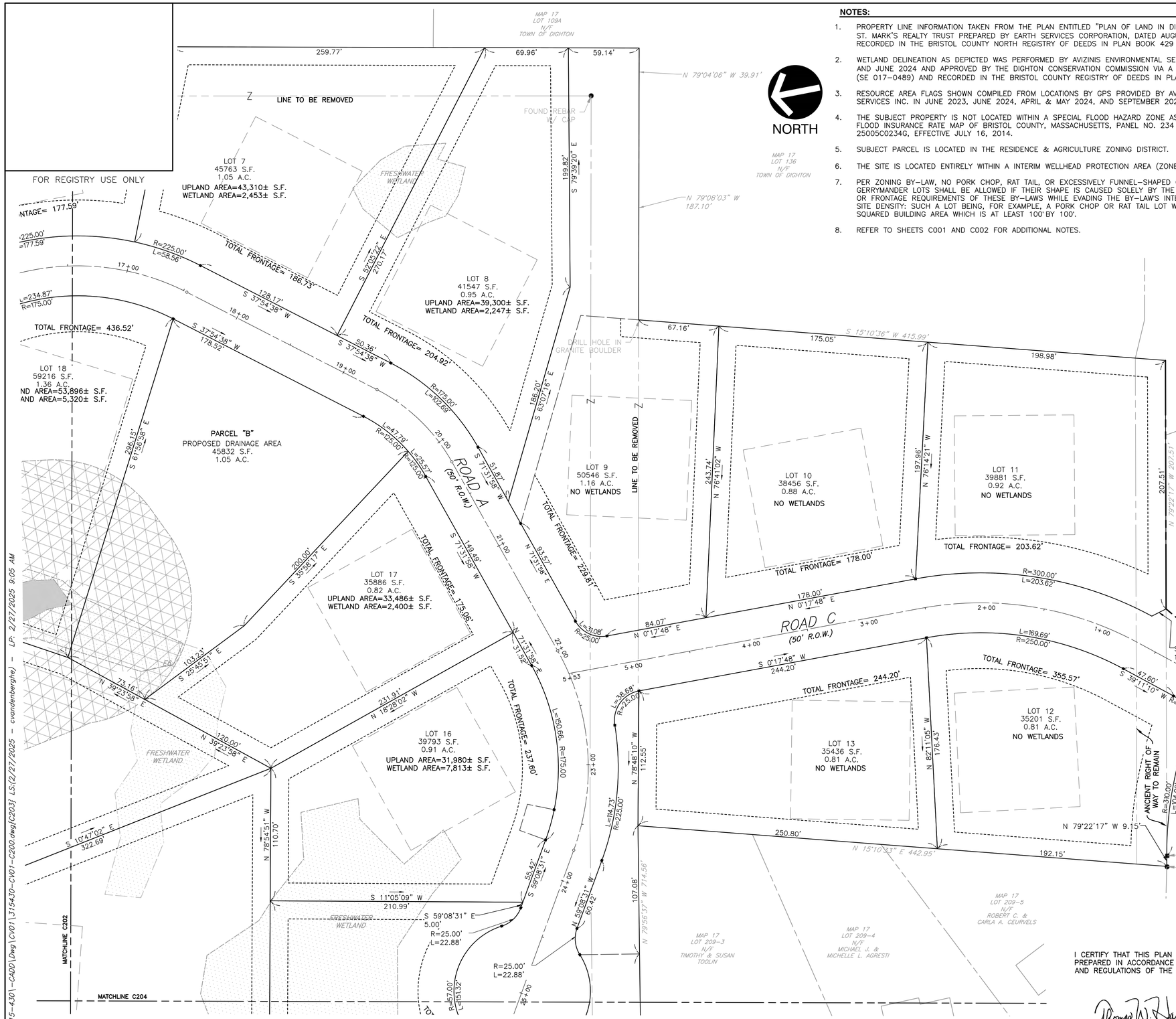

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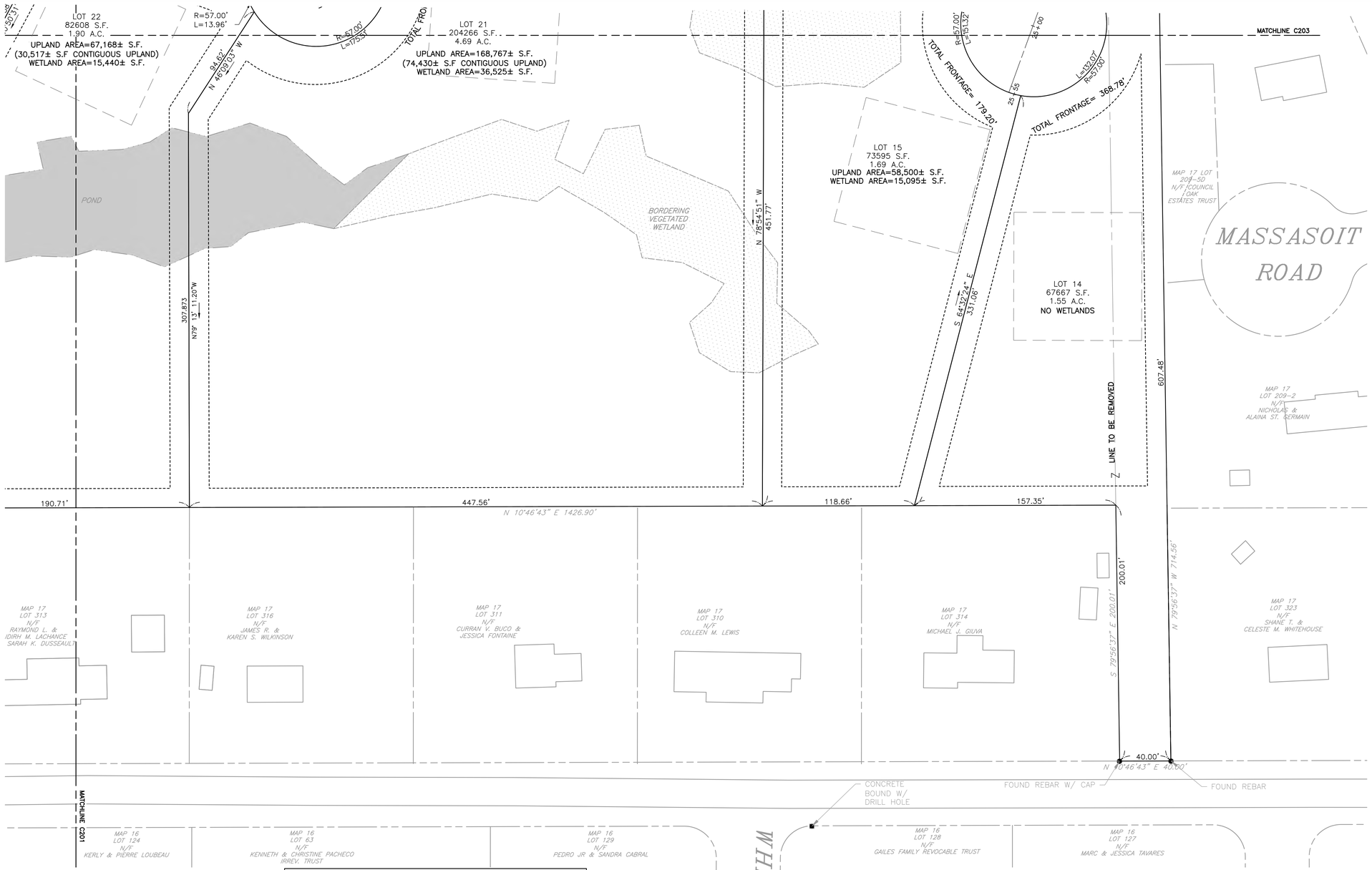

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MINIMUM FRONTAGE (FT.):	175
MIN. FRONT SETBACK (FT.): (FROM CENTERLINE OF PUBLIC WAY)	55
MINIMUM SIDE YARD (FT.):	15
MINIMUM REAR YARD (FT.):	15
MAXIMUM BUILDING HEIGHT (FT.):	35 (2.5 STORIES)
MINIMUM DISTANCE BETWEEN BLDGS (FT.):	10
MAXIMUM BLDG. LOT COVERAGE:	25%
MAXIMUM HEIGHT OF PROJECTIONS (FT.)	40

[1] PER ZONING BY LAW, LOT AREA IS DEFINED AS "AT LEAST A PIECE OF LAND 30,000 SQ. FT. FOR THE LOT AREA REQUIRED FOR ZONING COMPLIANCE SHALL BE CONTIGUOUS LAND OTHER THAN THAT UNDER ANY WATER BODY, BOG, SWAMP WET MEADOW OR OTHER WETLAND AS DEFINED IN § 40, CHAPTER 131, G.L.

I CERTIFY THAT THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE REGISTRY OF DEEDS.

Thomas W. Hardman
REGISTERED PROFESSIONAL LAND SURVEYOR

3/3/2025
DATE

TOWN OF DIGHTON
PLANNING BOARD
APPROVAL UNDER THE SUBDIVISION CONTROL LAW REQUIRED

DATE

COMMONWEALTH OF MASSACHUSETTS
CHRISTOPHER J VANDINBERGHE
CIVIL
No. 54907
REGISTERED PROFESSIONAL ENGINEER
3/3/25

COMMONWEALTH OF MASSACHUSETTS
THOMAS W. HARDMAN
NO. 33597
REGISTERED PROFESSIONAL LAND SURVEYOR
Thomas W. Hardman

REVISION RECORD

NO	DATE	DESCRIPTION

31 Bellows Road
Raynham, MA 02767
Ph: 774.501.2176
www.cecinc.com

Civil & Environmental Consultants, Inc.

BELL FARM ESTATES
ASSESSOR'S MAP 17
LOTS 135, 109, 208
MILK STREET, DIGHTON, MA

LOTTING PLAN

DATE:	FEBRUARY 2025	DRAWN BY: AMB
DWG SCALE:	1" = 40'	CHECKED BY: CJV
PROJECT NO:		315-430
APPROVED BY:		DSK

DRAWING NO.:
C204
SHEET 14 OF 35

P:\310-000\315-430\-CADD\Dwg\CVIL\315430-CVIL-C200.dwg[C204] LS:(2/27/2025 - cvandenberghe) -- LP: 2/27/2025 9:05 AM

NOTES:

1. PROPERTY LINE INFORMATION TAKEN FROM THE PLAN ENTITLED "PLAN OF LAND IN DIGHTON, MA." PREPARED FOR ST. MARK'S REALTY TRUST PREPARED BY EARTH SERVICES CORPORATION, DATED AUGUST 30, 2004 AND RECORDED IN THE BRISTOL COUNTY NORTH REGISTRY OF DEEDS IN PLAN BOOK 429 PAGE 48.
2. WETLAND DELINEATION AS DEPICTED WAS PERFORMED BY AVIZINIS ENVIRONMENTAL SERVICES INC. IN JUNE 2023 AND JUNE 2024 AND APPROVED BY THE DIGHTON CONSERVATION COMMISSION VIA A DECISION ON 09/19/2024 (SE 017-0489) AND RECORDED IN THE BRISTOL COUNTY REGISTRY OF DEEDS IN PLAN BOOK 5830 PAGE 256.
3. RESOURCE AREA FLAGS SHOWN COMPILED FROM LOCATIONS BY GPS PROVIDED BY AVIZINIS ENVIRONMENTAL SERVICES INC. IN JUNE 2023, JUNE 2024, APRIL & MAY 2024, AND SEPTEMBER 2024.
4. THE SUBJECT PROPERTY IS NOT LOCATED WITHIN A SPECIAL FLOOD HAZARD ZONE AS DELINEATED ON F.E.M.A. FLOOD INSURANCE RATE MAP OF BRISTOL COUNTY, MASSACHUSETTS, PANEL NO. 234 OF 550, MAP NUMBER 25005C0234G, EFFECTIVE JULY 16, 2014.
5. SUBJECT PARCEL IS LOCATED IN THE RESIDENCE & AGRICULTURE ZONING DISTRICT.
6. THE SITE IS LOCATED ENTIRELY WITHIN A INTERIM WELLHEAD PROTECTION AREA (ZONE II).
7. PER ZONING BY-LAW, NO PORK CHOP, RAT TAIL, OR EXCESSIVELY FUNNEL-SHAPED OR OTHERWISE UNUSUALLY GERRYMANDER LOTS SHALL BE ALLOWED IF THEIR SHAPE IS CAUSED SOLELY BY THE ATTEMPT TO MEET LOT SIZE OR FRONTAGE REQUIREMENTS OF THESE BY-LAWS WHILE EVADING THE BY-LAW'S INTENT TO REGULATE BUILDING SITE DENSITY: SUCH A LOT BEING, FOR EXAMPLE, A PORK CHOP OR RAT TAIL LOT WHICH DOES NOT CONTAIN A SQUARED BUILDING AREA WHICH IS AT LEAST 100' BY 100'.
8. REFER TO SHEETS C001 AND C002 FOR ADDITIONAL NOTES.

LEGEND

- EXISTING SUBJECT PROPERTY LINE
- EXISTING EASEMENT
- EXISTING RIGHT-OF-WAY
- EXISTING EDGE OF PAVEMENT
- EXISTING STRUCTURE
- EXISTING WETLAND LINE
- PROPOSED PARCEL LINE
- PROPOSED SUBJECT PROPERTY BOUNDARY
- PROPOSED RIGHT-OF-WAY
- PROPOSED EASEMENT
- PROPOSED BUILDING SETBACK
- PROPOSED BUILDING BOX
- PROPOSED BOUND TO BE SET
- PROPOSED ROADWAY CENTERLINE
- WETLAND
- WATERBODY
- LIMIT OF VERNAL POOL

FOR REGISTRY USE ONLY

LINE TO BE REMOVED

FOUND REBAR W/ CAP

N 79°04'06" W 39.91'

N 79°08'03" W 187.10'

NORTH

MAP 17 LOT 109A N/F TOWN OF DIGHTON

MAP 17 LOT 136 N/F TOWN OF DIGHTON

MAP 17 LOT 209-14 N/F JOHN R. & TRICIA L. COUTURE

MAP 17 LOT 209-13 N/F RAYMOND J. & SANDRA ROSARIO

MAP 17 LOT 209-8 N/F CARL J. AFTOSMES

MAP 17 LOT 209-5 N/F ROBERT C. & CARLA A. CEURVELS

MAP 17 LOT 209-4 N/F MICHAEL J. & MICHELLE L. AGRESTI

MAP 17 LOT 209-3 N/F TIMOTHY & SUSAN TOOLIN

LOT 7 · LOT 8 · LOT 9 · LOT 10 · LOT 11 · LOT 12 · LOT 13 · LOT 16 · LOT 17 · LOT 18 · LOT 20 · LOT 21

FRESHWATER WETLAND

PROPOSED DRAINAGE EASEMENT AREA=15,715± S.F.

PARCEL "B" PROPOSED DRAINAGE AREA

PROPOSED DRAINAGE EASEMENT AREA=6,200± S.F.

PROPOSED DRAINAGE EASEMENT AREA=545± S.F.

DRILL HOLE IN GRANITE BOULDER

15' WIDE ACCESS & DRAINAGE EASEMENT

ROAD A (50' R.O.W.)

ROAD C (50' R.O.W.)

COUNCIL OAK WAY

ANCIENT RIGHT OF WAY TO REMAIN

FOUND REBAR

CONCRETE BOUND W/ DRILL HOLE

FOUND REBAR

259.77' · 69.96' · 59.14' · 199.87' · S 29°39'20" E · 210.17' · S 52°05'52" E · 128.17' · S 37°54'38" W · 50.36' · 67.16' · 175.05' · S 15°10'36" E 415.99' · 198.98' · 186.20' · S 63°07'16" E 180.75' · S 15°10'36" W 48.59' · 225.00' =177.59' · R=225.00' L=55.56' · L=234.87' R=175.00' · S 37°54'38" W 178.52' · R=175.00' L=102.69' · L=47.78' R=125.00' · L=125.37' · S 71°31'38" W 51.67' · 21.09' · N 71°31'38" E 93.57' · 296.15' S 61°56'58" E · 200.00' S 35°58'17" E · 105.23' S 20°45'51" E · N 39°23'58" E 71.16' · 120.00' N 39°23'58" E · 231.91' N 16°26'02" W · 149.49' S 71°31'38" W · N 71°31'38" E 31.92' · L=150.66 R=175.00' · S 10°47'02" E 322.69' · N 78°54'58" W 110.70' · S 11°05'09" W 210.99' · S 59°08'31" E 55.42' · S 59°08'31" W 60.42' · S 10°03'23" W 49.87' · 114.73' R=225.00' · N 78°48'10" W 112.55' · N 79°56'37" W 714.56' · 107.08' · R=57.00' L=151.32' · L=112.07' R=57.00' · R=25.00' L=22.88' · S 59°08'31" E 5.00' · R=25.00' L=22.88' · S 22°16'29" W 22.77' · S 62°27'41" E 22.76' · N 30°51'29" E 23.15' · L=26.22' · 243.74' N 76°41'02" W · 197.96' N 76°14'21" W · 207.51' N 79°22'17" W 207.51' · 178.00' N 0°17'48" E · 84.07' N 0°17'48" E · L=23.08' R=25.00' · S 0°17'48" W 244.20' · R=300.00' L=203.62' · L=169.69' R=250.00' · S 50°49'43" W 35.13' · R=25.00' L=40.60' · S 16°03'57" E 13.38' · S 39°11'10" W 43.60' · L=35.07' R=25.00' · R=310.13' L=96.06' · R=30.00' L=104.92' · N 79°22'17" W 9.15' · 250.80' · N 15°10'43" E 442.95' · 192.15' · N 82°11'05" W 176.43' · 178.52' · S 37°54'38" W

TOWN OF DIGHTON PLANNING BOARD
APPROVAL UNDER THE SUBDIVISION CONTROL LAW REQUIRED

DATE

I CERTIFY THAT THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE RULES AND REGULATIONS OF THE REGISTRY OF DEEDS.

REGISTERED PROFESSIONAL LAND SURVEYOR

3/3/2025
DATE

COMMONWEALTH OF MASSACHUSETTS · CHRISTOPHER J VANDENBERGHE · CIVIL · No. 54507 · REGISTERED PROFESSIONAL ENGINEER · 3/3/25

COMMONWEALTH OF MASSACHUSETTS · THOMAS W. HARDMAN · NO. 33597 · REGISTERED PROFESSIONAL LAND SURVEYOR

REVISION RECORD

NO	DATE	DESCRIPTION

31 Bellows Road
Raynham, MA 02767
Ph: 774.501.2176
www.cecinc.com

Civil & Environmental Consultants, Inc.

BELL FARM ESTATES
ASSESSOR'S MAP 17
LOTS 135, 109, 208
MILK STREET, DIGHTON, MA

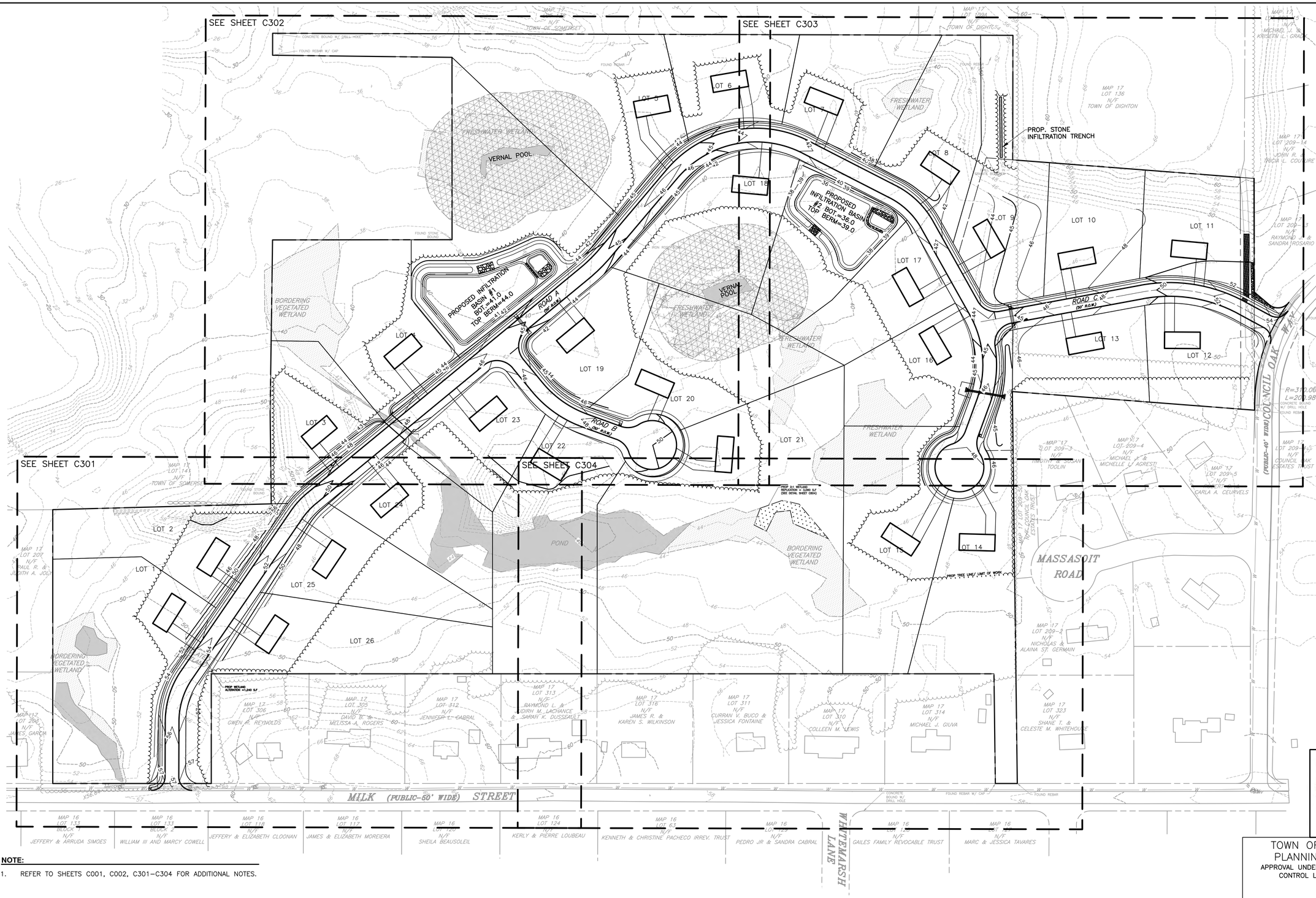
EASEMENT PLAN

DATE:	FEBRUARY 2025
DWG SCALE:	1" = 40'
PROJECT NO:	315-430
APPROVED BY:	DSK
DRAWN BY:	AMB
CHECKED BY:	CJV

DRAWING NO.: **C205**

SHEET 15 OF 35

P:_310-000_315-430_CADD\Dwg\CIVD1\315430-CIV01-C200.dwg[C205] LS:(2/27/2025 - cvandenberghe) - LP: 2/27/2025 10:34 AM



NOTE:

1. REFER TO SHEETS C001, C002, C301–C304 FOR ADDITIONAL NOTES.

SCALE IN FEET
0 80 160

TOWN OF DIGHTON
PLANNING BOARD
APPROVAL UNDER THE SUBDIVISION CONTROL LAW REQUIRED

DATE

COMMONWEALTH OF MASSACHUSETTS
CHRISTOPHER J. VANDENBERGHE
CIVIL
No. 54907
REGISTERED PROFESSIONAL ENGINEER
3/3/25

REVISION RECORD

NO	DATE	DESCRIPTION

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31 Bellows Road
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Ph: 774.501.2176
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BELL FARM ESTATES
ASSESSOR'S MAP 17
LOTS 135, 109, 208
MILK STREET, DIGHTON, MA

GRADING & DRAINAGE KEY MAP

DATE:	FEBRUARY 2025	DRAWN BY: AMB
DWG SCALE:	1" = 80'	CHECKED BY: CJV
PROJECT NO:		315-430
APPROVED BY:		DSK

DRAWING NO.:
C300
SHEET 16 OF 35

P:\310-000\315-430\-CADD\Dwg\CIVIL\315430-CIV01-C300.dwg[C300] LS:(2/24/2025 - cvandenberghe) — LP: 2/27/2025 9:06 AM

FOR REGISTRY USE ONLY

NORTH

LEGEND

- EXISTING SUBJECT PROPERTY LINE
- EXISTING EASEMENT
- EXISTING RIGHT-OF-WAY
- 100 EXISTING INDEX (MAJOR) CONTOUR
- 99 EXISTING INTERMEDIATE (MINOR) CONTOUR
- EXISTING FEMA FLOOD ZONE
- A1 EXISTING WETLAND LINE
- 25BZ 25-FT NO-TOUCH
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- EXISTING CATCH BASIN
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- 45 PROPOSED INDEX (MAJOR) CONTOUR
- 52 PROPOSED INTERMEDIATE (MINOR) CONTOUR
- ×44.2 PROPOSED SPOT ELEVATION
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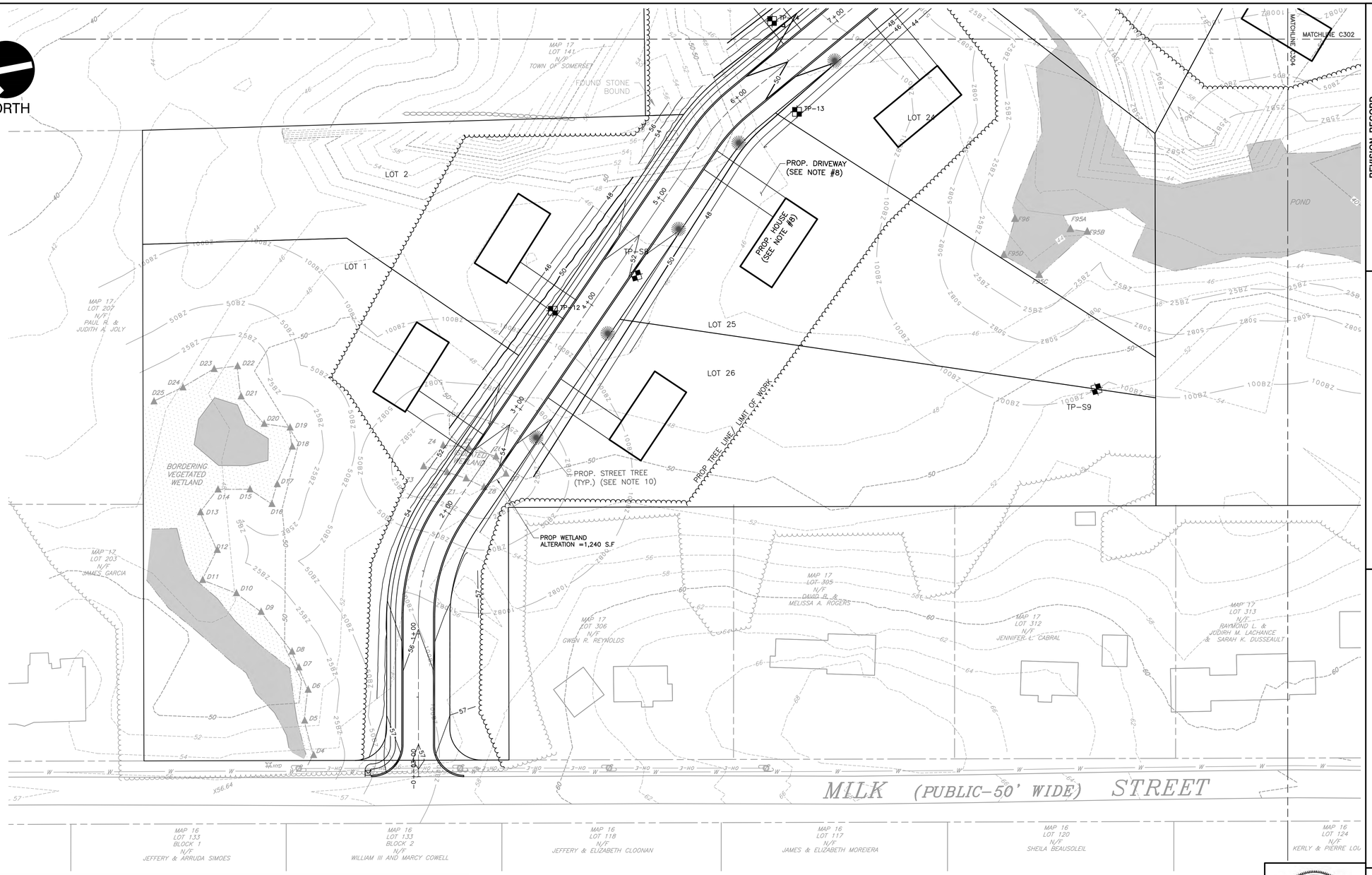
- PROPOSED CATCH BASIN
- PROPOSED STORM MANHOLE
- DMH-3 PROPOSED STRUCTURE LABEL
- TEST PITS
- TP-S3
- PROPOSED STREET TREE



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9. REFER TO SHEETS C600-C604 FOR DRAINAGE RIMS, INVERTS, PIPE SIZES AND SLOPES.
10. REFER TO SHEET C803 FOR TEST PIT INFORMATION
11. TREES TO BE PLANTED SHALL BE WELL BRANCHED, NURSERY GROWN STOCK AT LEAST TWO AND ONE-HALF (2.5) INCH TRUNK DIAMETER AT FOUR (4) FEET ABOVE GROUND, AND BE FREE OF INJURY, HARMFUL INSECTS, AND DISEASES AND SHALL BE LONG-LIVED SPECIES ADAPTED TO THE LOCAL ENVIRONMENT AND APPROVED BY THE PLANNING BOARD.
12. REFER TO SHEETS C001 AND C002 FOR ADDITIONAL NOTES.

SCALE IN FEET
0 40 80

COMMONWEALTH OF MASSACHUSETTS
CHRISTOPHER J. VANDENBERGHE
CIVIL
No. 54907
REGISTERED PROFESSIONAL ENGINEER
3/3/25

TOWN OF DIGHTON
PLANNING BOARD
APPROVAL UNDER THE SUBDIVISION CONTROL LAW REQUIRED

DATE

REVISION RECORD

NO	DATE	DESCRIPTION

31 Bellows Road
Raynham, MA 02767
Ph: 774.501.2176
www.cecinc.com
Civil & Environmental Consultants, Inc.

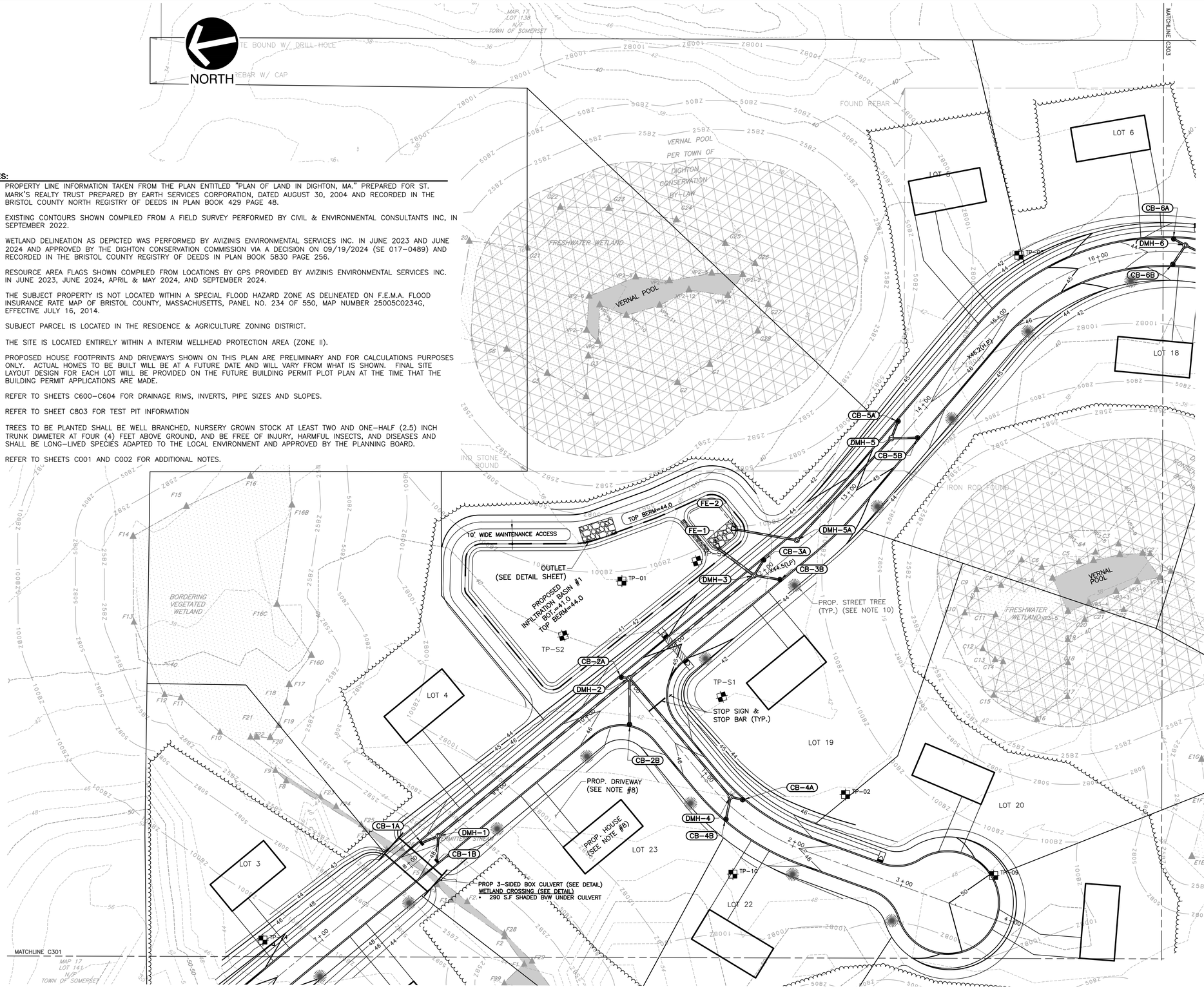
BELL FARM ESTATES
ASSESSORS MAP 17
LOTS 135, 109, 208
MILK STREET, DIGHTON, MA

GRADING & DRAINAGE PLAN

DATE:	FEBRUARY 2025
DWG SCALE:	1" = 40'
PROJECT NO:	315-430
APPROVED BY:	DSK
DRAWN BY:	AMB
CHECKED BY:	CJV

DRAWING NO.:
C301
SHEET 17 OF 35

P:\310-000\315-430\-CADD\Dwg\CIVIL\315430-CIVIL-C300.dwg(C301) LS:(2/24/2025 - cvandenberghe) - LP: 2/27/2025 9:08 AM



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LEGEND

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- EXISTING EASEMENT
- EXISTING RIGHT-OF-WAY
- 100 EXISTING INDEX (MAJOR) CONTOUR
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SCALE IN FEET
0 40 80

TOWN OF DIGHTON
PLANNING BOARD
APPROVAL UNDER THE SUBDIVISION CONTROL LAW REQUIRED

DATE

COMMONWEALTH OF MASSACHUSETTS
CHRISTOPHER J VANDENBERGHE
CIVIL
No. 54907
REGISTERED PROFESSIONAL ENGINEER
3/3/25

REVISION RECORD

NO	DATE	DESCRIPTION

31 Bellows Road
Raynham, MA 02767
Ph: 774.501.2176
www.cecinc.com
Civil & Environmental Consultants, Inc.

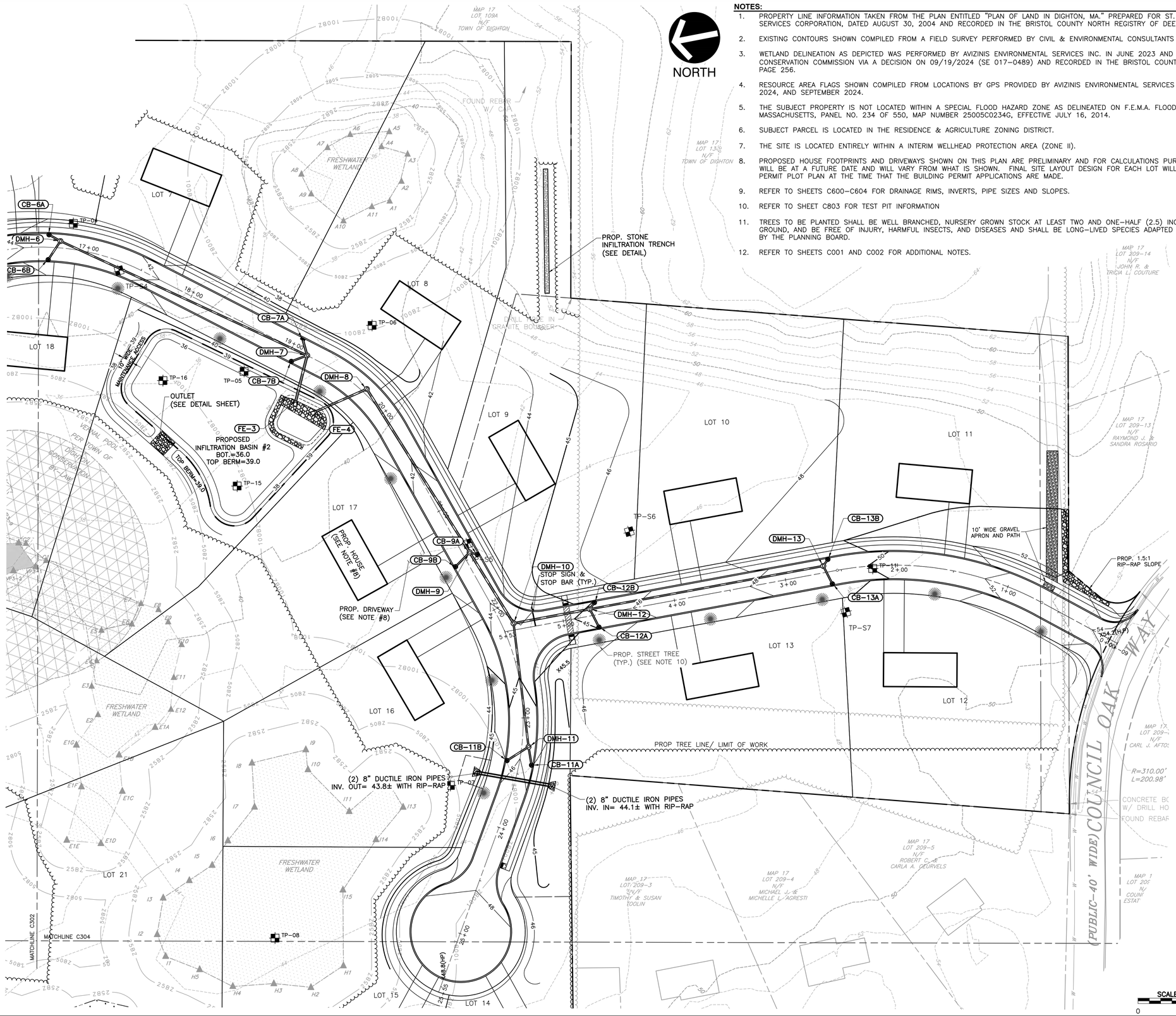
BELL FARM ESTATES
ASSESSOR'S MAP 17
LOTS 135, 109, 208
MILK STREET, DIGHTON, MA

GRADING & DRAINAGE PLAN

DATE:	FEBRUARY 2025
DWG SCALE:	1" = 40'
PROJECT NO:	315-430
APPROVED BY:	DSK
DRAWN BY:	AMB
CHECKED BY:	CJV

DRAWING NO.:
C302
SHEET 18 OF 35

P:\310-000\315-430\-CAD\Dwg\CV01\315430-CV01-C300.dwg(C302) LS:(2/24/2025 - cvandenberghe) - LP: 2/27/2025 9:09 AM



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BELL FARM ESTATES
ASSESSORS MAP 17
LOTS 135, 109, 208
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COMMONWEALTH OF MASSACHUSETTS
CHRISTOPHER J VANDENBERGHE
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TOWN OF DIGHTON
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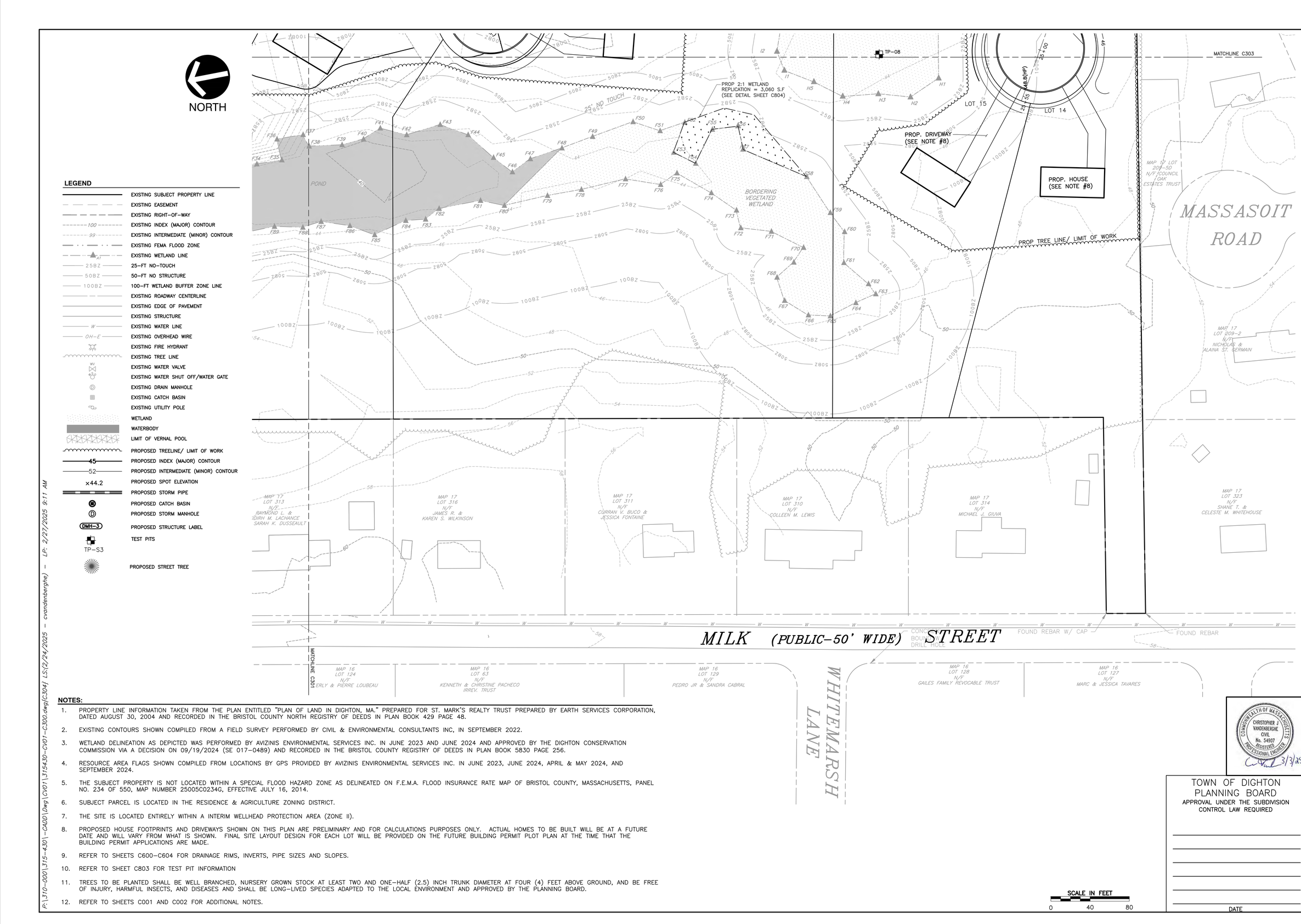
GRADING & DRAINAGE PLAN

DATE:	FEBRUARY 2025
DWG SCALE:	1" = 40'
PROJECT NO:	315-430
APPROVED BY:	DSK
DRAWN BY:	AMB
CHECKED BY:	CJV

DRAWING NO.:
C303
SHEET 19 OF 35

P:\310-000\315-430\-CADD\Dwg\CV01\315430-CV01-C300.dwg(C303) LS:(2/24/2025 - cvandenberghe) -- LP: 2/27/2025 9:10 AM



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6. SUBJECT PARCEL IS LOCATED IN THE RESIDENCE & AGRICULTURE ZONING DISTRICT.
7. THE SITE IS LOCATED ENTIRELY WITHIN A INTERIM WELLHEAD PROTECTION AREA (ZONE II).
8. PROPOSED HOUSE FOOTPRINTS AND DRIVEWAYS SHOWN ON THIS PLAN ARE PRELIMINARY AND FOR CALCULATIONS PURPOSES ONLY. ACTUAL HOMES TO BE BUILT WILL BE AT A FUTURE DATE AND WILL VARY FROM WHAT IS SHOWN. FINAL SITE LAYOUT DESIGN FOR EACH LOT WILL BE PROVIDED ON THE FUTURE BUILDING PERMIT PLOT PLAN AT THE TIME THAT THE BUILDING PERMIT APPLICATIONS ARE MADE.
9. REFER TO SHEETS C600-C604 FOR DRAINAGE RIMS, INVERTS, PIPE SIZES AND SLOPES.
10. REFER TO SHEET C803 FOR TEST PIT INFORMATION
11. TREES TO BE PLANTED SHALL BE WELL BRANCHED, NURSERY GROWN STOCK AT LEAST TWO AND ONE-HALF (2.5) INCH TRUNK DIAMETER AT FOUR (4) FEET ABOVE GROUND, AND BE FREE OF INJURY, HARMFUL INSECTS, AND DISEASES AND SHALL BE LONG-LIVED SPECIES ADAPTED TO THE LOCAL ENVIRONMENT AND APPROVED BY THE PLANNING BOARD.
12. REFER TO SHEETS C001 AND C002 FOR ADDITIONAL NOTES.

COMMONWEALTH OF MASSACHUSETTS
CHRISTOPHER J VANDENBERGHE
CIVIL
No. 54907
REGISTERED PROFESSIONAL ENGINEER
3/3/25

TOWN OF DIGHTON
PLANNING BOARD
APPROVAL UNDER THE SUBDIVISION CONTROL LAW REQUIRED

DATE

REVISION RECORD

NO	DATE	DESCRIPTION

31 Bellows Road
Raynham, MA 02767
Ph: 774.501.2176
www.cecinc.com
Civil & Environmental Consultants, Inc.

BELL FARM ESTATES
ASSESSOR'S MAP 17
LOTS 135, 109, 208
MILK STREET, DIGHTON, MA

GRADING & DRAINAGE PLAN

DATE:	FEBRUARY 2025
DWG SCALE:	1" = 40'
PROJECT NO:	315-430
DRAWN BY:	AMB
CHECKED BY:	CJV
APPROVED BY:	DSK

DRAWING NO.:
C304
SHEET 20 OF 35

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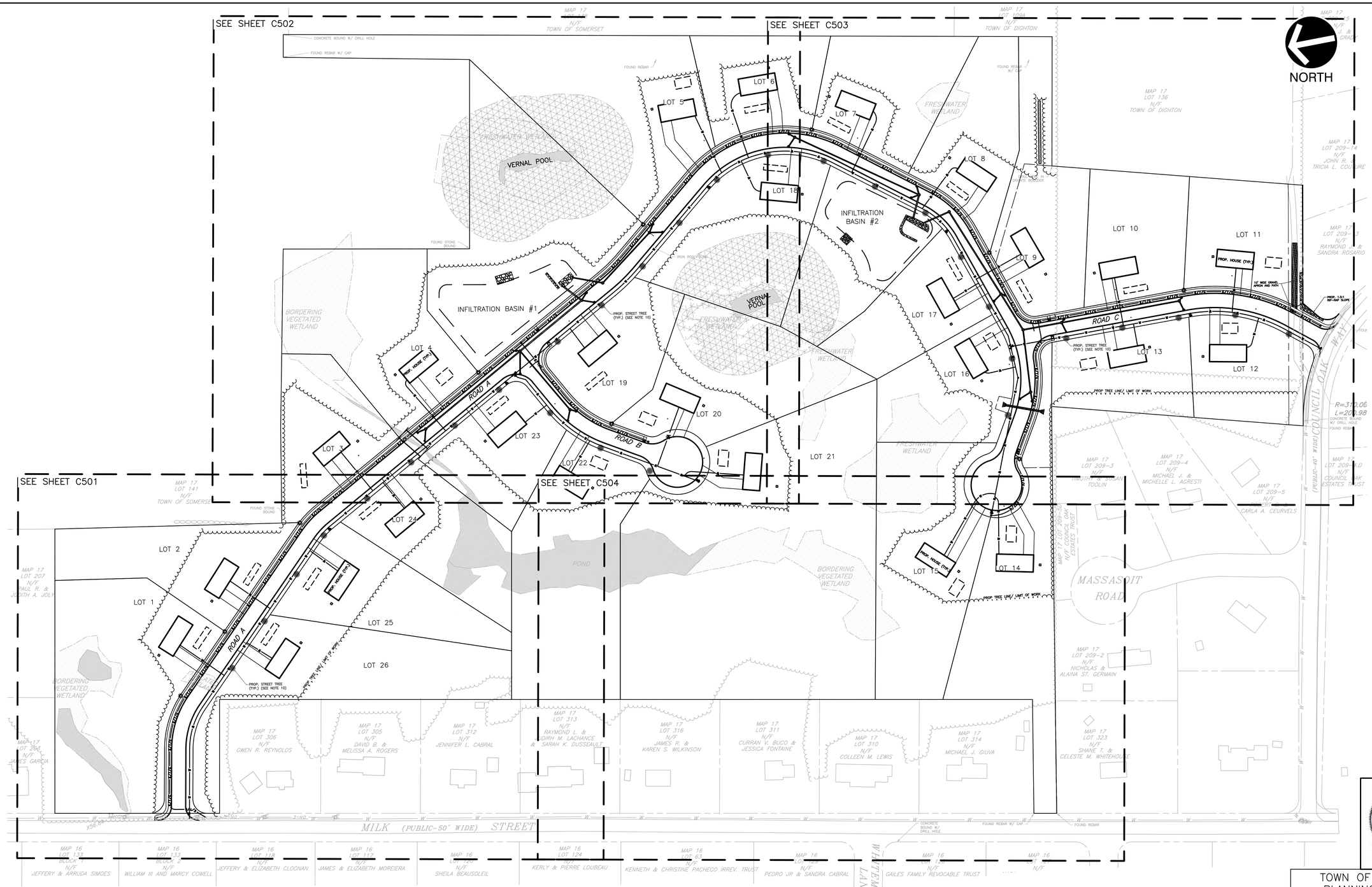

NOTE:

1. REFER TO SHEETS C001, C002, C501–C504 FOR ADDITIONAL NOTES.

TOWN OF DIGHTON
PLANNING BOARD
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BELL FARM ESTATES
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MILK STREET, DIGHTON, MA

UTILITY KEY MAP

DATE:	FEBRUARY 2025	DRAWN BY: AMB
DWG SCALE:	1" = 80'	CHECKED BY: CJV
PROJECT NO:		315-430
APPROVED BY:		DSK

DRAWING NO.:
C500
SHEET 21 OF 35

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NORTH

LEGEND

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- WETLAND
- WATERBODY
- LIMIT OF VERNAL POOL
- PROPOSED WATER LINE
- PROPOSED WATER LINE BEND
- PROPOSED WATER HYDRANT
- PROPOSED WATER GATE VALVE
- PROPOSED CURB STOP
- E/T/C PROPOSED UNDERGROUND ELECTRIC
- PROPOSED LAMP POST
- PROPOSED LEACH FIELD

MAP 17 LOT 141 N/F TOWN OF SOMERSET
FOUND STONE BOUND
MATCHLINE C504
MATCHLINE C502
LOT 2
LOT 24
FIRE HYDRANT WITH 6" GATE VALVE
1" PLASTIC WATER SERVICE TUBING W/CURB STOP (TYP.) (SEE NOTE 10)
PROP. HOUSE (TYP.)
POND
PROP. LEACH FIELD (SEE DETAIL)(TYP.)
10' MIN.
PROP. 8" DICL CLASS 52 WATER MAIN
LOT 1
20' MIN.
10' MIN.
ROAD A
U.G PROPANE TANK (TYP. SEE NOTE 7)
LOT 25
LOT 26
PROP. CURB STOP (TYP.)
PROP. TREE LINE / LIMIT OF WORK
PROPOSED LAMP POST WITH LIGHT (SEE DETAIL)
BORDERING VEGETATED WETLAND
PROP WETLAND ALTERATION =1,240 S.F
MAP 17 LOT 207 N/F PAUL R. & JUDITH A. JOLY
MAP 17 LOT 203 N/F JAMES GARCIA
MAP 17 LOT 306 N/F GWEN R. REYNOLDS
MAP 17 LOT 305 N/F DAVID B. & MELISSA A. ROGERS
MAP 17 LOT 312 N/F JENNIFER L. CABRAL
MAP 17 LOT 313 N/F RAYMOND L. & JUDITH M. LACHANCE & SARAH K. DUSSEAULT
PROP. TAPPING SLEEVE, VALVE & BOX RISER
CONNECT TO EXISTING ELECTRIC AND COMMUNICATIONS AT POLE WITH NEW RISER
MILK (PUBLIC-50' WIDE) STREET
MAP 16 LOT 133 BLOCK 1 N/F JEFFERY & ARRUDA SIMOES
MAP 16 LOT 133 BLOCK 2 N/F WILLIAM III AND MARCY COWELL
MAP 16 LOT 118 N/F JEFFERY & ELIZABETH CLOONAN
MAP 16 LOT 117 N/F JAMES & ELIZABETH MOREIERA
MAP 16 LOT 120 N/F SHEILA BEAUSOLEIL
MAP 16 LOT 124 N/F KERLY & PIERRE LOU

NOTES:

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SCALE IN FEET
0 40 80

COMMONWEALTH OF MASSACHUSETTS
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TOWN OF DIGHTON
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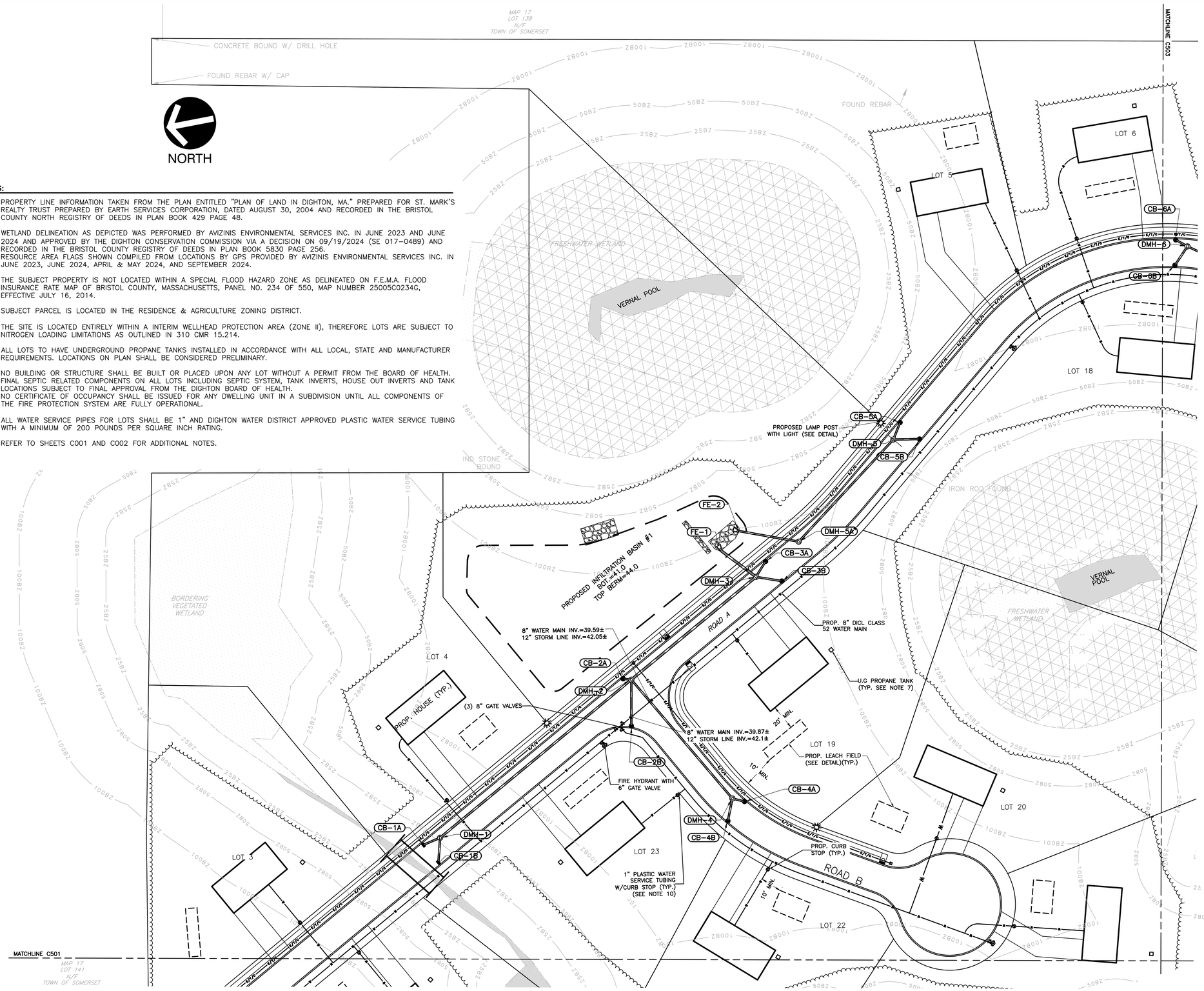
UTILITY PLAN

DATE:	FEBRUARY 2025
DRAWN BY:	AMB
DWG SCALE:	1" = 40'
CHECKED BY:	CJV
PROJECT NO.:	315-430
APPROVED BY:	DSK

DRAWING NO.:
C501
SHEET 22 OF 35

P:\310-000\315-430\CADD\Dwg\CV01\315430-CV01-C500.dwg[C501] LS:(2/24/2025 - cvandenberghe) — LP: 2/27/2025 9:12 AM



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SCALE IN FEET
0 40 80

REVISION RECORD

NO	DATE	DESCRIPTION

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BELL FARM ESTATES
ASSESSOR'S MAP 17
LOTS 135, 109, 208
MILK STREET, DIGHTON, MA

COMMONWEALTH OF MASSACHUSETTS
CHRISTOPHER J. VANDENBERGHE
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No. 54907
REGISTERED PROFESSIONAL ENGINEER
3/3/25

TOWN OF DIGHTON
PLANNING BOARD
APPROVAL UNDER THE SUBDIVISION CONTROL LAW REQUIRED

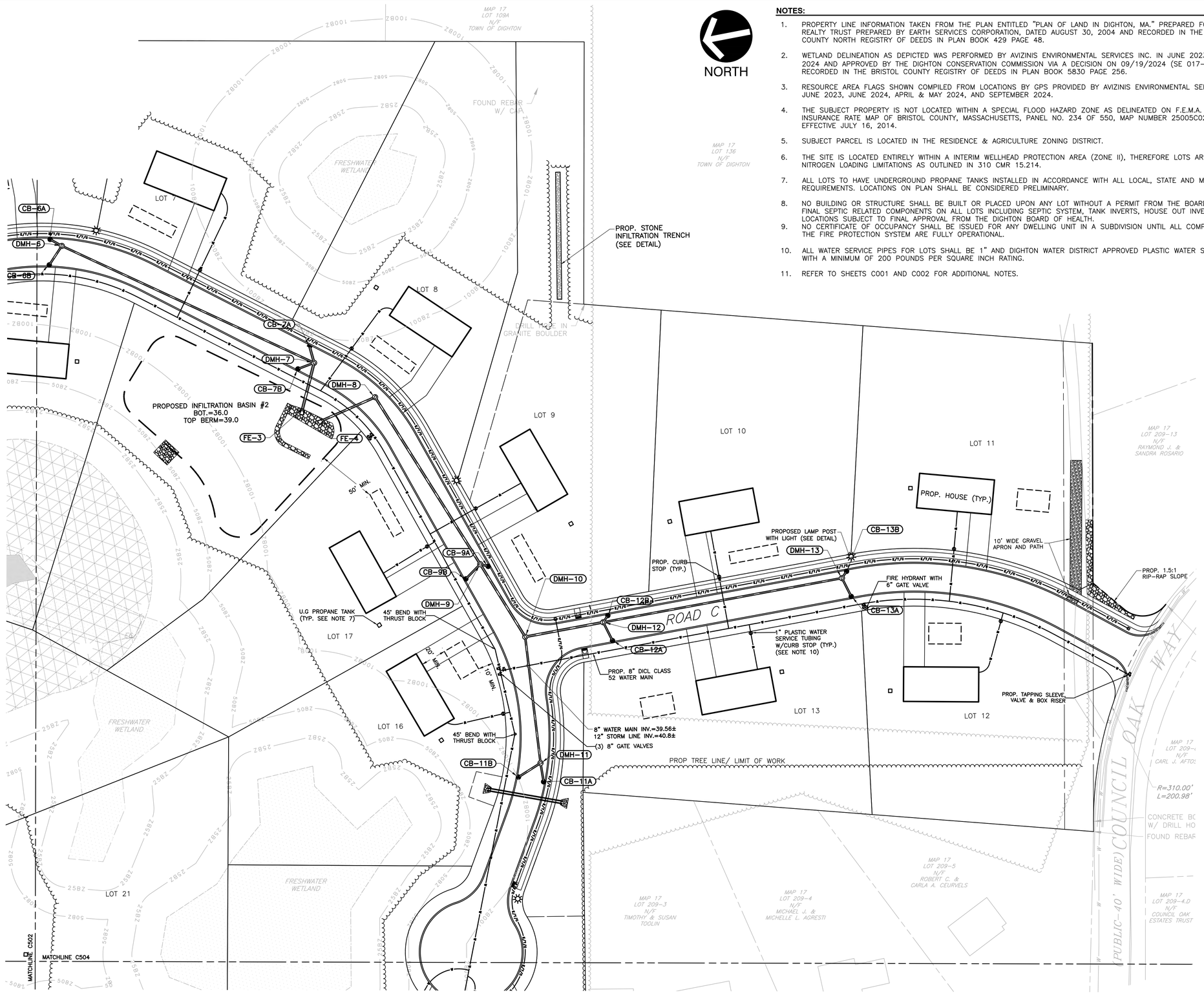
DATE

UTILITY PLAN

DATE:	FEBRUARY 2025	DRAWN BY:	AMB
DWG SCALE:	1" = 40'	CHECKED BY:	CJV
PROJECT NO:			315-430
APPROVED BY:			DSK

DRAWING NO.:
C502
SHEET 23 OF 35

P:\310-0001\315-430\-CADD\Dwg\CIVIL\315430-CIV01-C500.dwg[C502] LS:(2/24/2025 - cvandenberghe) - LP: 2/27/2025 9:12 AM



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LEGEND

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COMMONWEALTH OF MASSACHUSETTS
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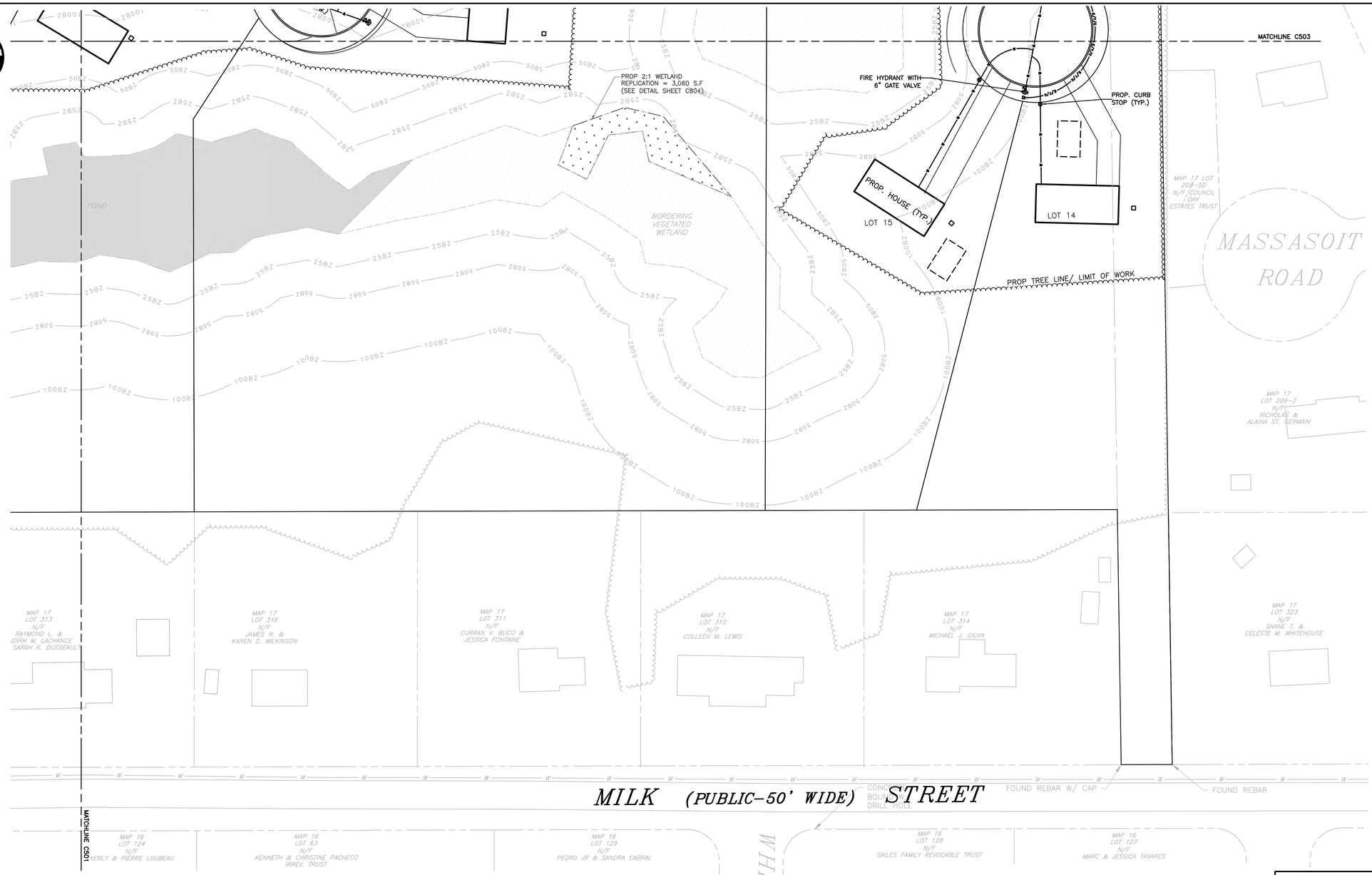
C503
SHEET 24 OF 35

P:\310-000\315-430\-CADD\Dwg\CV01\315430-CV01-C500.dwg(C503) LS:(2/24/2025 - cvandenberghe) - LP: 2/27/2025 9:13 AM

NORTH



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3/3/25

TOWN OF DIGHTON
PLANNING BOARD
APPROVAL UNDER THE SUBDIVISION CONTROL LAW REQUIRED

DATE

REVISION RECORD

NO	DATE	DESCRIPTION

31 Bellows Road
Raynham, MA 02767
Ph: 774.501.2176
www.cecinc.com

Civil & Environmental Consultants, Inc.

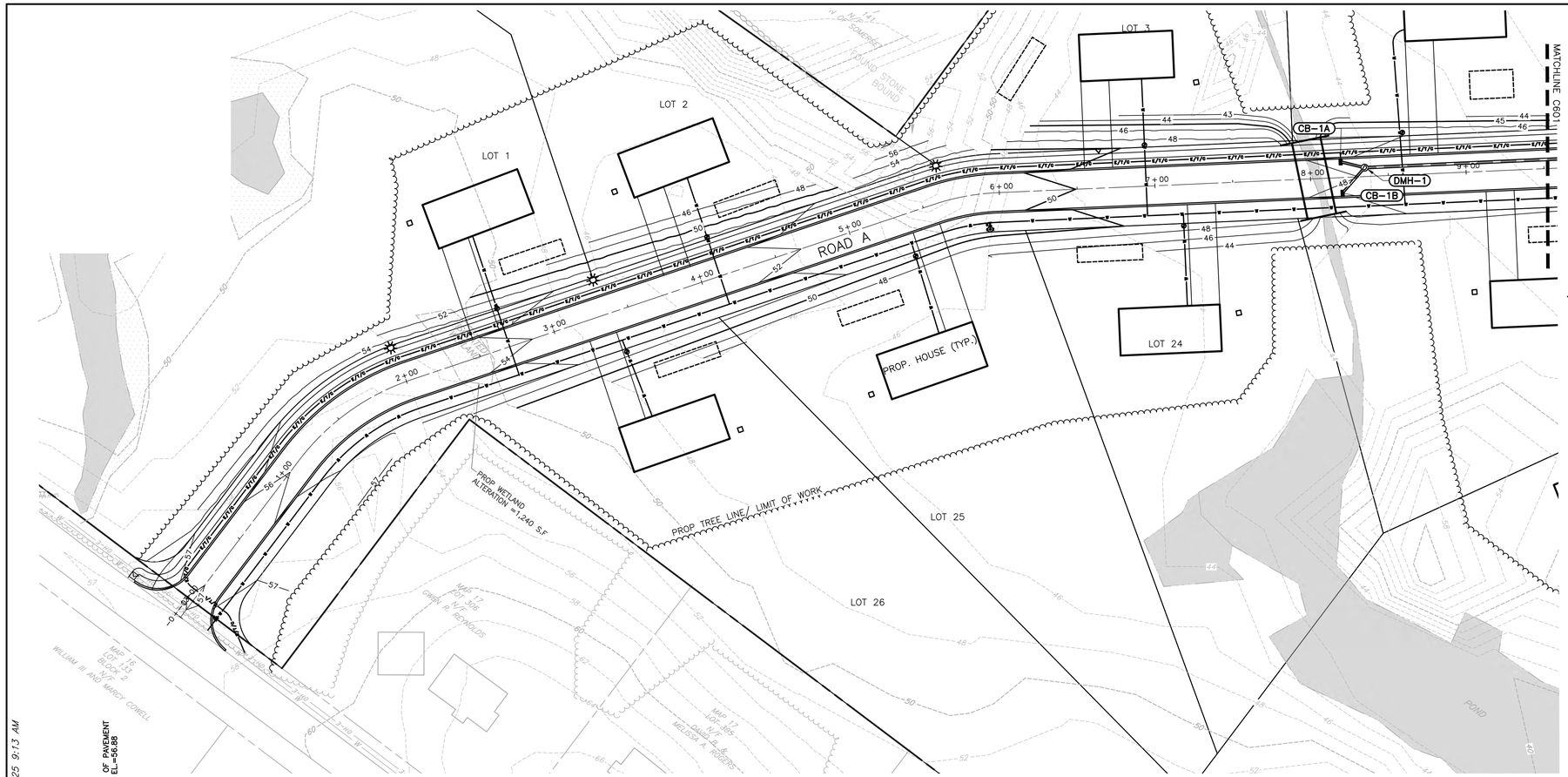
BELL FARM ESTATES
ASSESSOR'S MAP 17
LOTS 135, 109, 208
MILK STREET, DIGHTON, MA

UTILITY PLAN

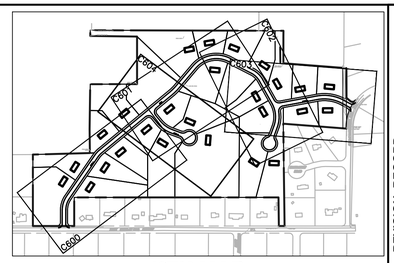
DATE:	FEBRUARY 2025
DWG SCALE:	1" = 40'
PROJECT NO:	315-430
DRAWN BY:	AMB
CHECKED BY:	CJV
APPROVED BY:	DSK

DRAWING NO.:
C504
SHEET 25 OF 35

P:\310-000\315-430\-CADD\Dwg\CV01\315430-CV01-C500.dwg[C504] LS:(2/24/2025 - cvandenberghe) — LP: 2/27/2025 9:13 AM



NORTH



KEY MAP
SCALE 1"=500'

NOTES:

1. PROPERTY LINE INFORMATION TAKEN FROM THE PLAN ENTITLED "PLAN OF LAND IN DIGHTON, MA." PREPARED FOR ST. MARK'S REALTY TRUST PREPARED BY EARTH SERVICES CORPORATION, DATED AUGUST 30, 2004 AND RECORDED IN THE BRISTOL COUNTY NORTH REGISTRY OF DEEDS IN PLAN BOOK 429 PAGE 48.
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9. REFER TO SHEETS TO C300-C304 & C500-C504 FOR GRADING AND DRAINAGE AND UTILITY INFORMATION.
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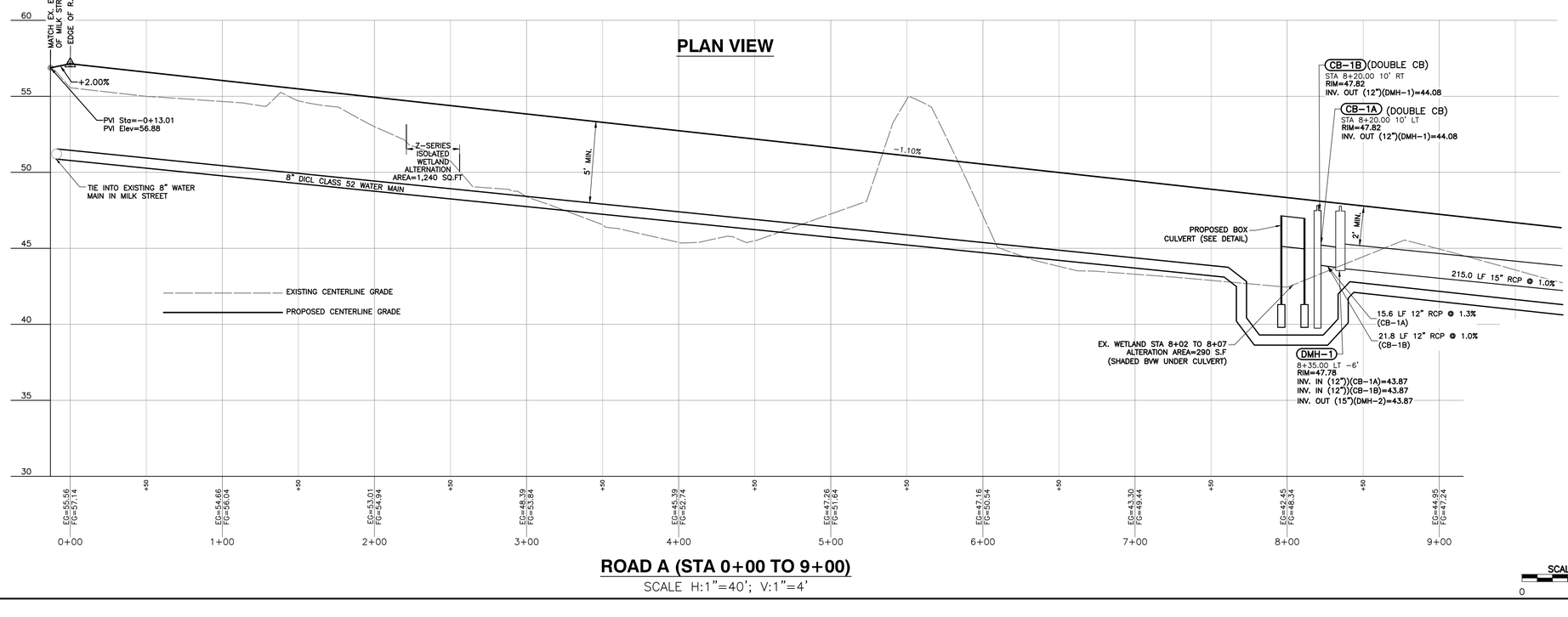


ROAD A (STA 0+00 TO 9+00)
SCALE H:1"=40'; V:1"=4'

SCALE IN FEET
0 40 80

TOWN OF DIGHTON
PLANNING BOARD
APPROVAL UNDER THE SUBDIVISION CONTROL LAW REQUIRED

DATE

COMMONWEALTH OF MASSACHUSETTS
CHRISTOPHER J VANDENBERGHE
CIVIL
No. 54907
REGISTERED PROFESSIONAL ENGINEER
3/3/25

REVISION RECORD

NO	DATE	DESCRIPTION

Civil & Environmental Consultants, Inc.
31 Bellows Road
Raynham, MA 02767
Ph: 774.501.2176
www.cecinc.com

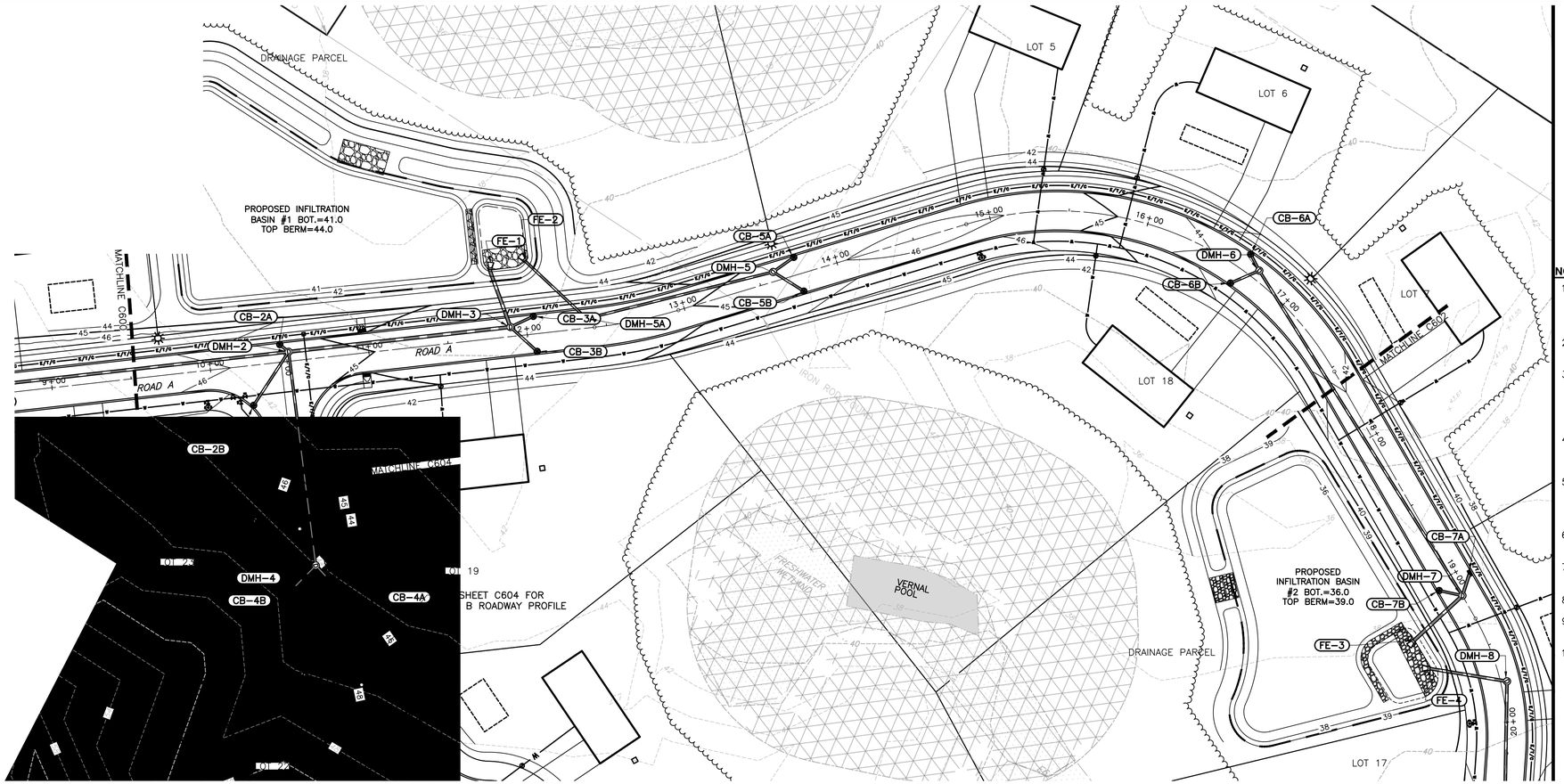
BELL FARM ESTATES
ASSESSOR'S MAP 17
LOTS 135, 109, 208
MILK STREET, DIGHTON, MA

PLAN AND PROFILE

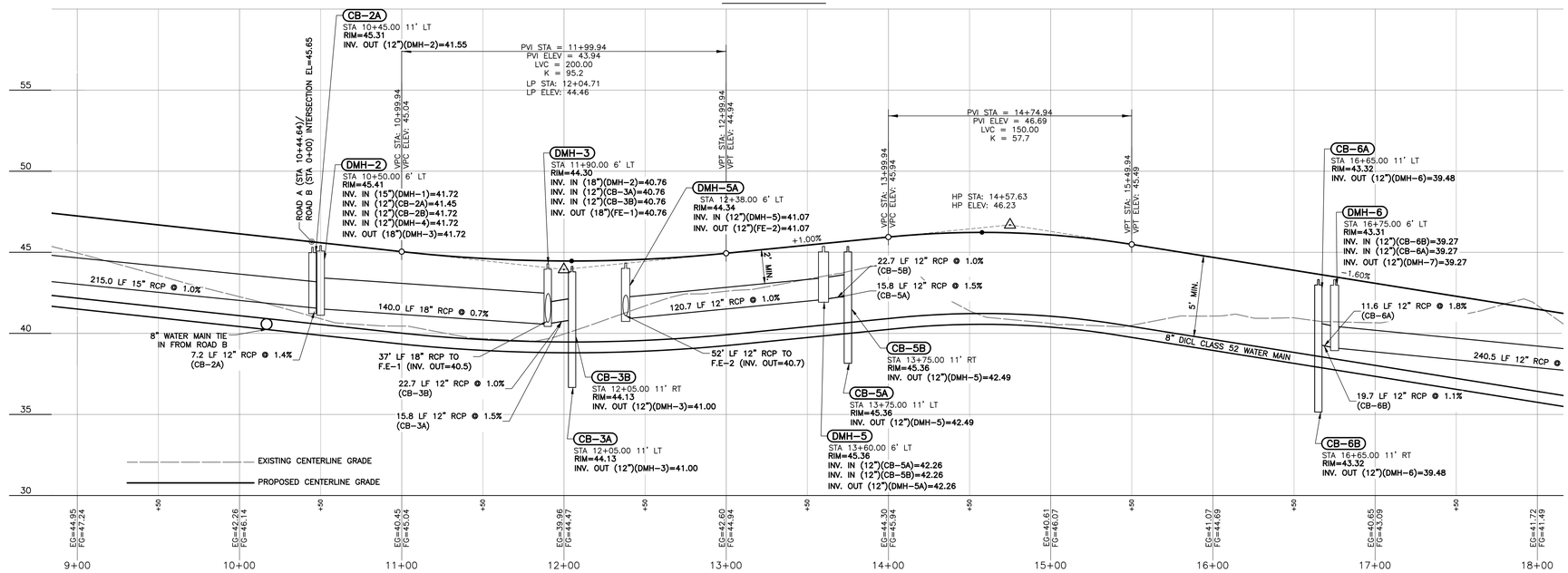
DATE:	FEBRUARY 2025	DRAWN BY:	AMB
DWG SCALE:	1" = 40'	CHECKED BY:	CJV
PROJECT NO:			315-430
APPROVED BY:			DSK

DRAWING NO.:
C600
SHEET 26 OF 35

P:\310-000\315-430\-CADD\Dwg\CIVD1\315430-CIVD1-C600.dwg[C600] LS:(2.24/2025 - cvandenberghe) - LP: 2/27/2025 9:13 AM



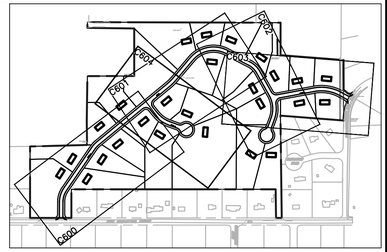
PLAN VIEW



ROAD A (STA 9+00 TO 18+00)

SCALE H:1"=40'; V:1"=4'

SCALE IN FEET
0 40 80



KEY MAP

SCALE 1"=500'

NOTES:

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REVISION RECORD

NO	DATE	DESCRIPTION

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Civil & Environmental Consultants, Inc.

BELL FARM ESTATES
ASSESSOR'S MAP 17
LOTS 135, 109, 208
MILK STREET, DIGHTON, MA

COMMONWEALTH OF MASSACHUSETTS
CHRISTOPHER J VANDENBERGHE
CIVIL
No. 54907
REGISTERED PROFESSIONAL ENGINEER
3/3/25

TOWN OF DIGHTON
PLANNING BOARD
APPROVAL UNDER THE SUBDIVISION CONTROL LAW REQUIRED

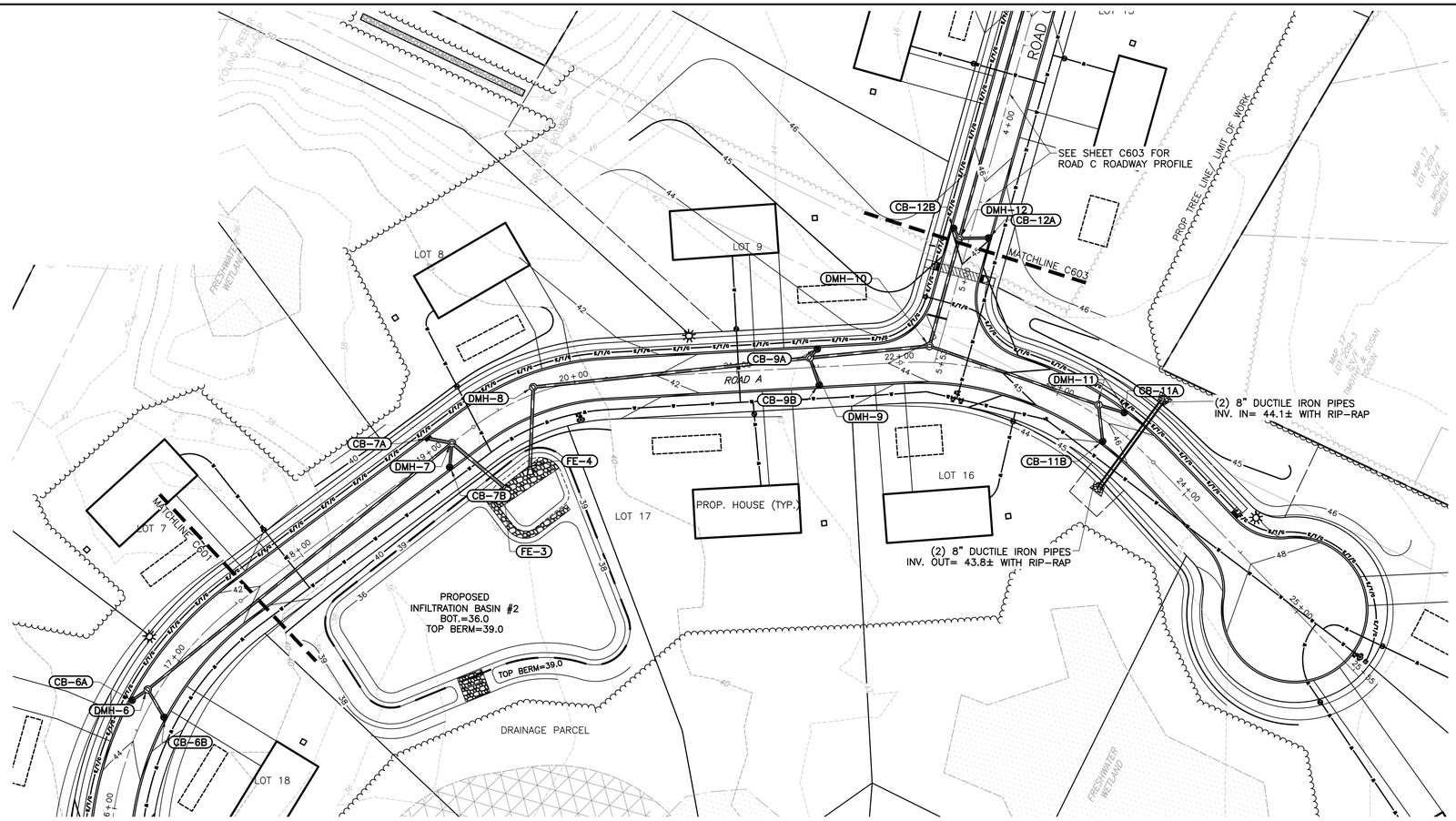
DATE

PLAN AND PROFILE

DATE:	FEBRUARY 2025
DWG SCALE:	1" = 40'
PROJECT NO:	315-430
APPROVED BY:	DSK
DRAWN BY:	AMB
CHECKED BY:	CJV

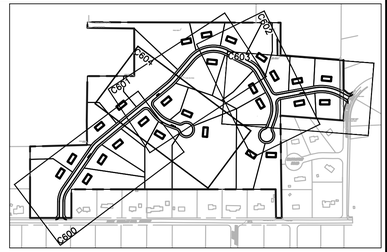
DRAWING NO.:
C601
SHEET 27 OF 35

P:\310-000\315-430\-CAD\Dwg\CV01\315430-CV01-C600.dwg[C601] LS:(2/24/2025 - cvandenberghe) -- LP: 2/27/2025 9:13 AM



KEY MAP

SCALE 1"=500'



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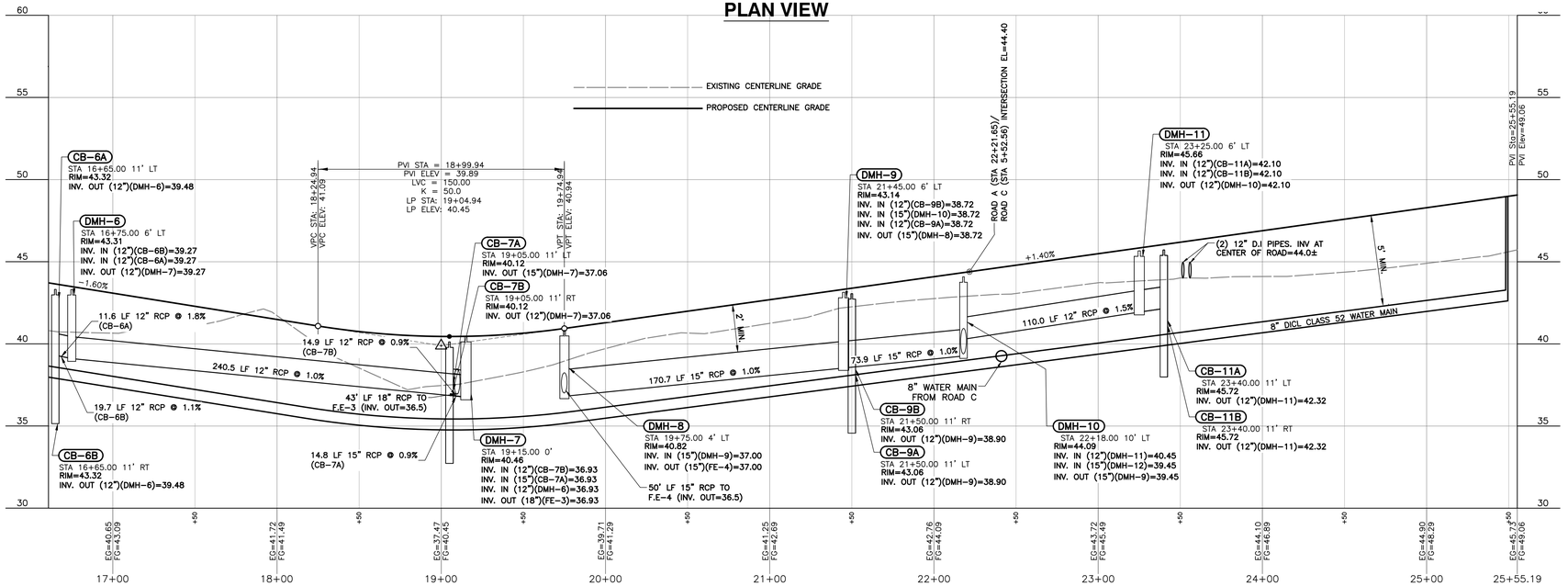
PLAN VIEW



ROAD A (STA 18+00 TO 22+55.25)

SCALE H:1"=40'; V:1"=4'

SCALE IN FEET

0 40 80

31 Bellows Road
Raynham, MA 02767
Ph: 774.501.2176
www.cecinc.com

Civil & Environmental Consultants, Inc.

REVISION RECORD

NO	DATE	DESCRIPTION

BELL FARM ESTATES
ASSESSOR'S MAP 17
LOTS 135, 109, 208
MILK STREET, DIGHTON, MA

PLAN AND PROFILE

DATE:	FEBRUARY 2025	DRAWN BY:	AMB
DWG SCALE:	1" = 40'	CHECKED BY:	CJV
PROJECT NO:			315-430
APPROVED BY:			DSK

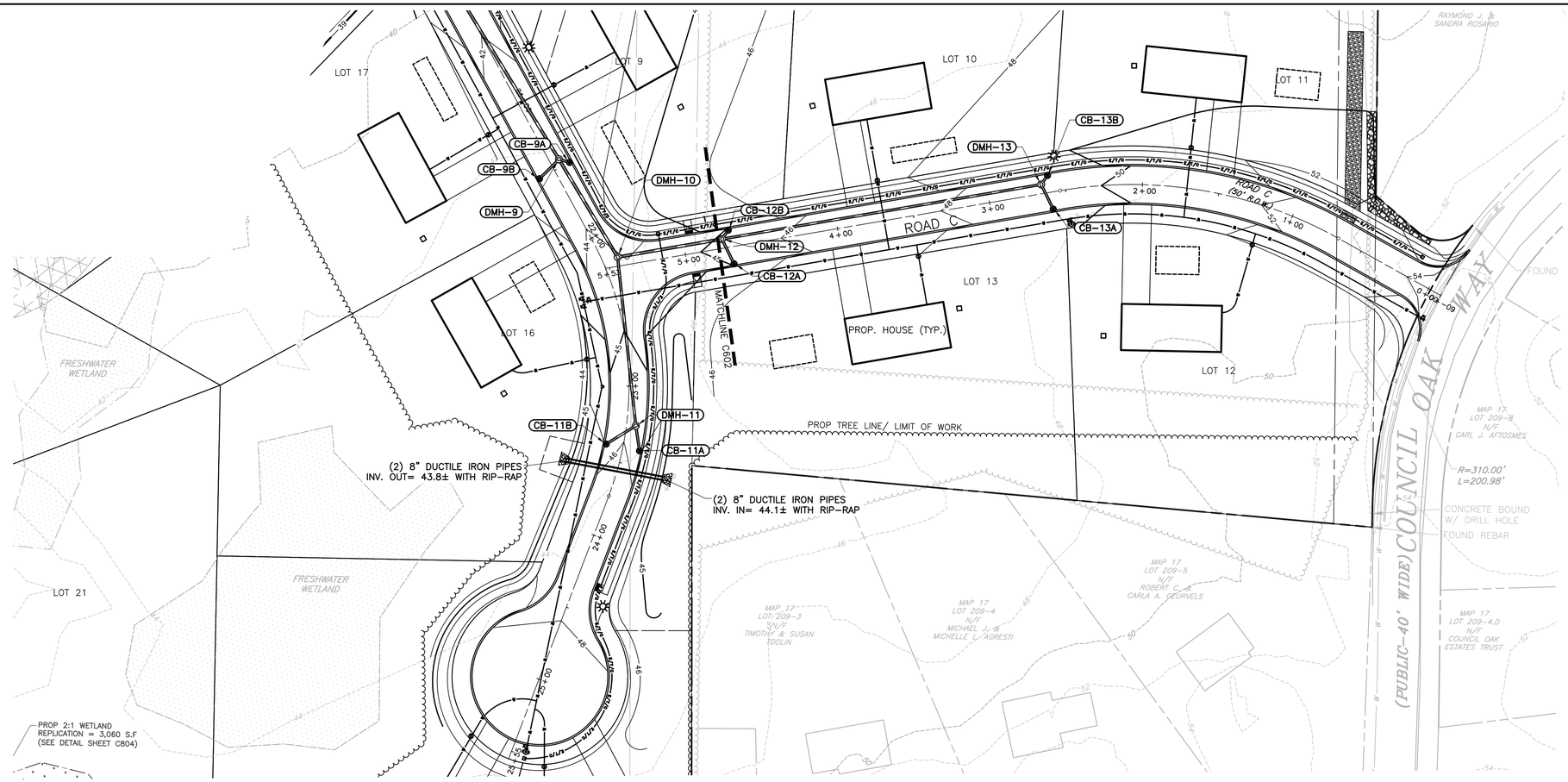
COMMONWEALTH OF MASSACHUSETTS
CHRISTOPHER J. VANDENBERGHE
CIVIL
No. 54907
REGISTERED PROFESSIONAL ENGINEER
3/3/25

TOWN OF DIGHTON
PLANNING BOARD
APPROVAL UNDER THE SUBDIVISION CONTROL LAW REQUIRED

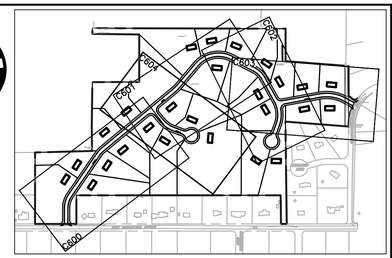
DATE

DRAWING NO.:
C602
SHEET 28 OF 35

P:\310-000\315-430\-CAD01\Dwg\CV01\315430-CV01-C600.dwg(C602) LS:(2/24/2025 - cvandenberghe) - LP: 2/27/2025 9:13 AM



NORTH



KEY MAP

SCALE 1"=500'

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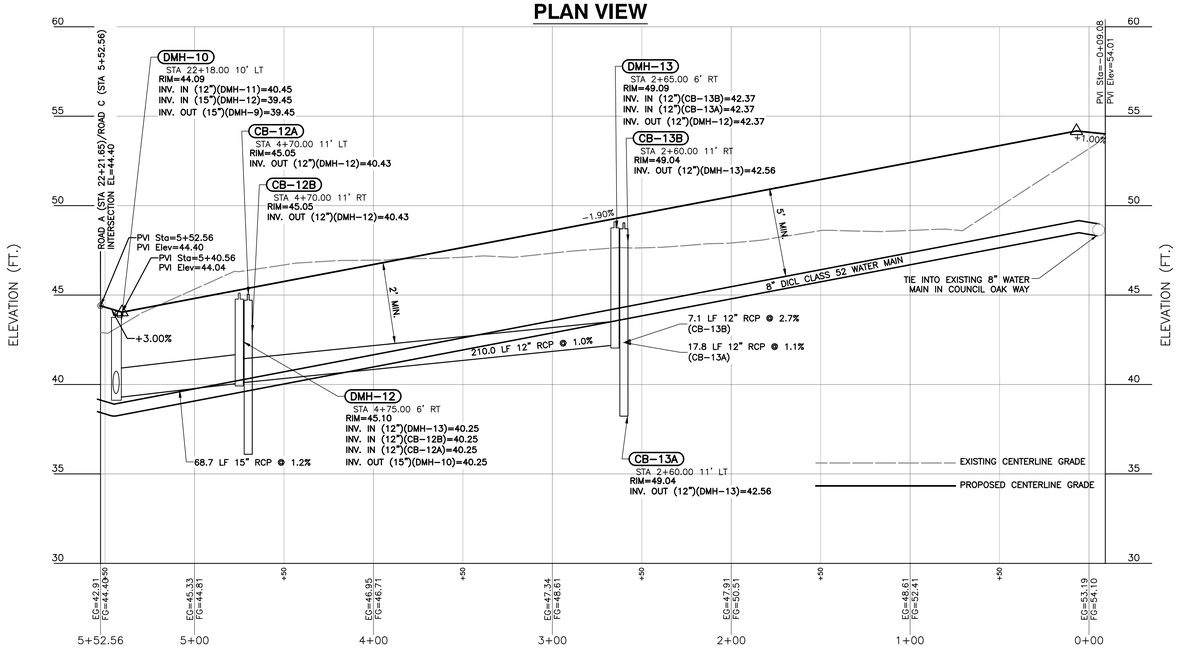
PLAN VIEW



ROAD C(STA 0+00 TO 5+52.56)

SCALE H:1"=40'; V:1"=4'

SCALE IN FEET

0 40 80

TOWN OF DIGHTON
PLANNING BOARD
APPROVAL UNDER THE SUBDIVISION CONTROL LAW REQUIRED

DATE

COMMONWEALTH OF MASSACHUSETTS
CHRISTOPHER J. VANDENBERGHE
CIVIL
No. 54907
REGISTERED PROFESSIONAL ENGINEER
3/3/25

REVISION RECORD

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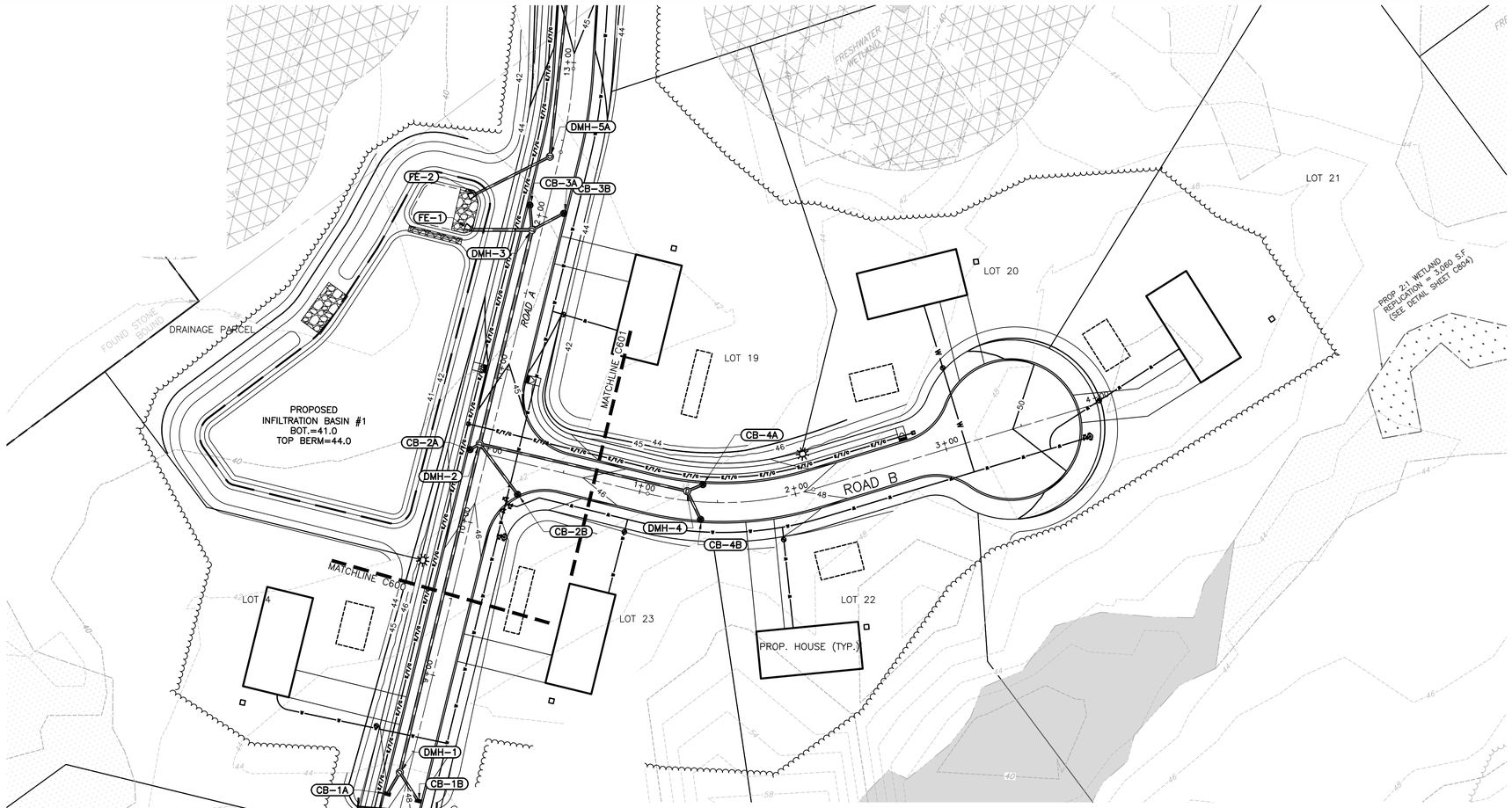
BELL FARM ESTATES
ASSESSOR'S MAP 17
LOTS 135, 109, 208
MILK STREET, DIGHTON, MA

PLAN AND PROFILE

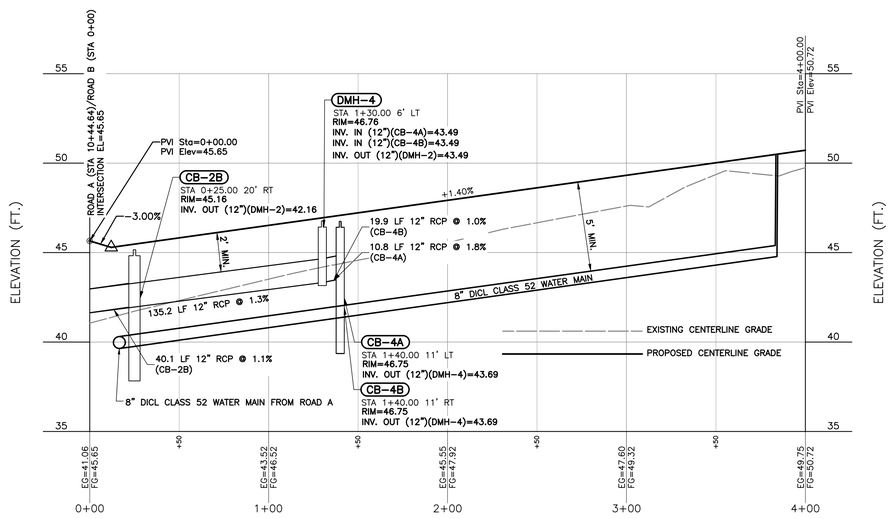
DATE:	FEBRUARY 2025	AMB
DRAWN BY:		CJV
DWG SCALE:	1" = 40'	
CHECKED BY:		315-430
PROJECT NO:		DSK
APPROVED BY:		

DRAWING NO.:
C603
SHEET 29 OF 35

P:\310-000\315-430\-CADD\Dwg\CIVD1\315430-CIVD1-C600.dwg[C603] LS:(2/24/2025 - cvandenberghe) - LP: 2/27/2025 9:14 AM

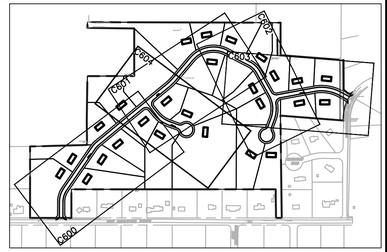


PLAN VIEW



ROAD B(STA 0+00 TO 4+00)

SCALE H:1"=40'; V:1"=4'



KEY MAP

SCALE 1"=500'

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SCALE IN FEET
0 40 80

TOWN OF DIGHTON
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COMMONWEALTH OF MASSACHUSETTS
CHRISTOPHER J VANDENBERGHE
CIVIL
No. 54907
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3/3/25

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BELL FARM ESTATES
ASSESSOR'S MAP 17
LOTS 135, 109, 208
MILK STREET, DIGHTON, MA

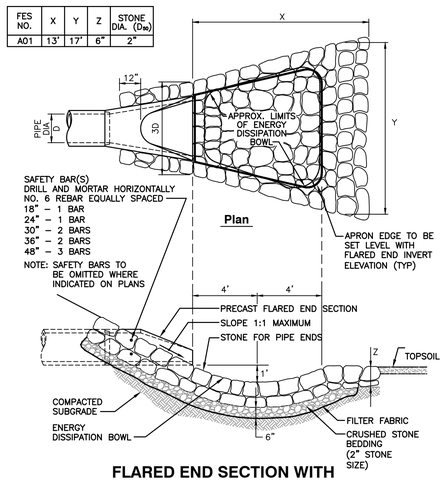
PLAN AND PROFILE

DATE:	FEBRUARY 2025	DRAWN BY:	AMB
DWG SCALE:	1" = 40'	CHECKED BY:	CJV
PROJECT NO:			315-430
APPROVED BY:			DSK

DRAWING NO.:
C604
SHEET 30 OF 35

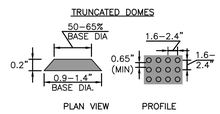
P:\310-000\315-430\-CADD\Dwg\CVD1\315430-CVD1-C600.dwg[C604] LS:(2/24/2025 - cvandenberghe) - LP: 2/27/2025 9:14 AM

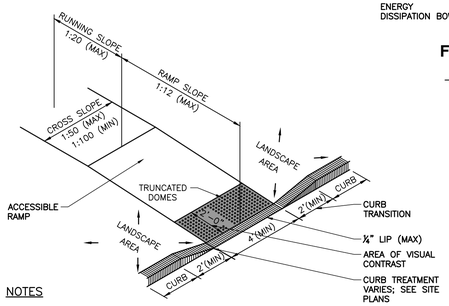
FES NO.	X	Y	Z	STONE DIA. (D_{50})
A01	13'	17'	6"	2"



FLARED END SECTION WITH STONE PROTECTION

N.T.S.



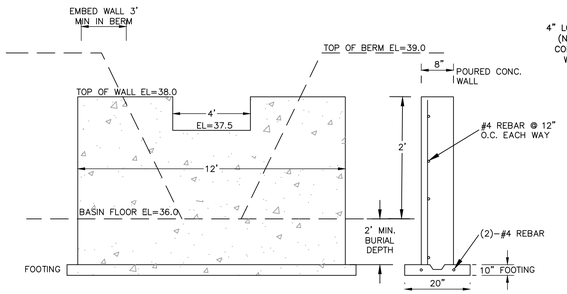


NOTES

1. CURB RAMPS SHALL CONFORM TO THE REQUIREMENTS SET FORTH IN THE AMERICANS WITH DISABILITIES ACT (ADA) STANDARDS FOR ACCESSIBLE DESIGN AND THE MASSACHUSETTS ARCHITECTURAL ACCESS BOARD (AAB) RULES AND REGULATIONS (521 CMR).
2. THE RUNNING SLOPE OF CURB RAMPS SHALL NOT BE GREATER THAN 1:12. THE RUNNING SLOPE OF WALKING SURFACES SHALL NOT BE GREATER THAN 1:20. THE CROSS SLOPE OF CURB RAMPS AND WALKING SURFACES SHALL NOT BE GREATER THAN 1:50 OR LESS THAN 1:100.
3. LANDINGS SHALL BE PROVIDED AT THE TOPS OF CURB RAMPS. THE LANDING CLEAR LENGTH SHALL BE 36 INCHES (3 FEET) MINIMUM. THE LANDING CLEAR WIDTH SHALL BE AT LEAST AS WIDE AS THE CURB RAMP, EXCLUDING FLARED SIDES, LEADING TO THE LANDING.
4. COUNTER SLOPES OF ADJOINING SURFACES IMMEDIATELY ADJACENT TO THE CURB RAMP SHALL NOT BE STEEPER THAN 1:20.
5. DETECTABLE WARNINGS SHALL CONTRAST VISUALLY WITH ADJACENT WALKING SURFACES AND BE INSTALLED PERPENDICULAR TO THE ACCESSIBLE ROUTE.

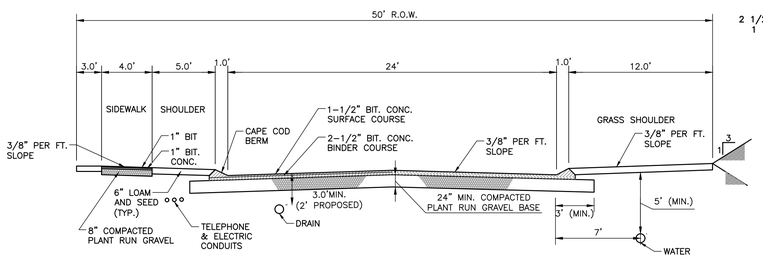
ACCESSIBLE CURB RAMP (TYPE "E")

N.T.S.



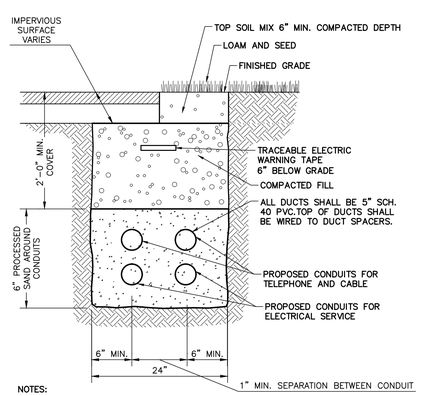
CONCRETE OUTLET WALL DETAIL FOR INFILTRATION BASIN #2

NOT TO SCALE



TYPICAL ROADWAY CROSS SECTION

N.T.S.

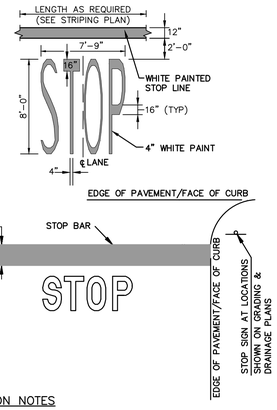


NOTES:

1. TRENCH WIDTH AND DEPTH TO BE IN ACCORDANCE WITH THE TELEPHONE COMPANY AND THE ELECTRICAL COMPANY REQUIREMENTS AS APPLICABLE.

UTILITY DUCT BANK

N.T.S.

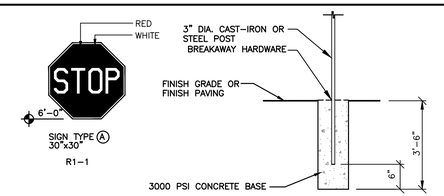


CONSTRUCTION NOTES

1. PAVEMENT MARKINGS TO BE INSTALLED FOR ON–SITE WORK IN THE LOCATIONS SHOWN ON THE GRADING & DRAINAGE PLANS.

PAINTED PAVEMENT MARKINGS

N.T.S.

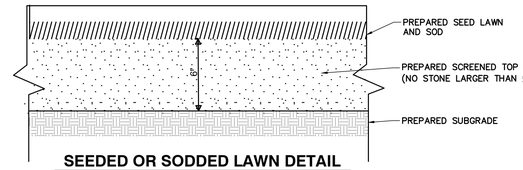


CONSTRUCTION NOTES:

1. SET POSTS IN CONCRETE TO A MINIMUM DEPTH OF 36". SIGN PANELS SHALL BE 0.100 ALUMINUM WITH RAISED OR SILKSCREEN COPY.
2. FOR POST MOUNTING, USE NON–CORROSIVE 3/8" 2. MACHINE BOLTS W/ WASHERS, 2 PER SIGN; OR IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
3. ALL TRAFFIC CONTROL SIGNS, SIGN POSTS, AND SIGN HARDWARE SHALL SATISFY THE REQUIREMENTS OF MASS DOT STANDARD SPECIFICATIONS
4. STOP BAR MUST BE PAINTED WHITE

SIGNS

N.T.S.



SEEDED OR SODDED LAWN DETAIL

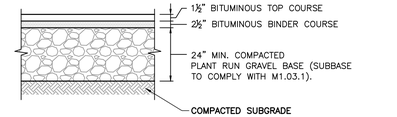
N.T.S.

NOTES:

1. TOP OF LOAM (TOP SOIL) IS FINISHED GRADE.
2. TOP SOIL SHALL CONTAIN BETWEEN 5% AND 12% ORGANIC MATTER AND SHALL HAVE A MAXIMUM STONE SIZE OF 3/4" AND SHALL CONFORM TO THE FOLLOWING GRADATION:

SIEVE:	% PASSING
1 1/4"	100
~~NO. 4~~	85–100
NO. 40	60–85
NO. 100	38–60
NO. 2000	28–40

3. UNPAVED AREAS WITHIN THE RIGHT–OF–WAY WHICH HAVE BEEN STRIPPED BY CONSTRUCTION SHALL BE GRADED TO MEET THE ADJOINING PROPERTY WITH A SLOPE OF NOT MORE THAN ONE (1) FOOT VERTICAL TO TWO (2) FEET HORIZONTAL AND LOAMED WITH AT LEAST SIX (6) INCHES OF GOOD QUALITY TOPSOIL. THESE AREAS SHALL BE THICKLY SEEDED WITH PERENNIAL GRASSES OR OTHER PLANTING MATERIALS APPROVED BY THE BOARD.



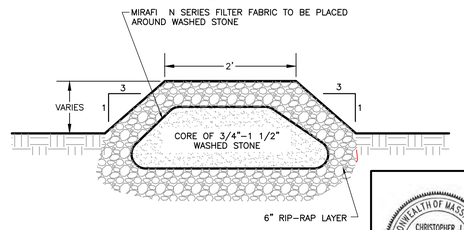
STANDARD DUTY FLEXIBLE PAVEMENT

NOTES

1. BITUMINOUS CONCRETE TOP COURSE SHALL BE ACCORDANCE WITH SUBSECTION 450 OF MASSDOT STANDARD SPECIFICATIONS
2. USE OF MASSDOT SPECIFIED MATERIAL FOR ALL ROADWAY BASE/SUBBASE FILL MATERIAL.
3. PLACE IN 8" LIFTS AND COMPACT TO AT LEAST 95% OF LABORATORY MAXIMUM DRY DENSITY (ASTM D 1557, METHOD D)

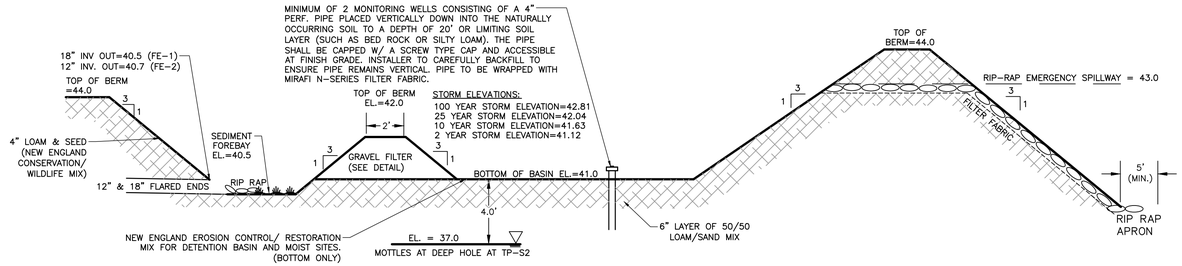
BITUMINOUS CONCRETE PAVEMENT

N.T.S.



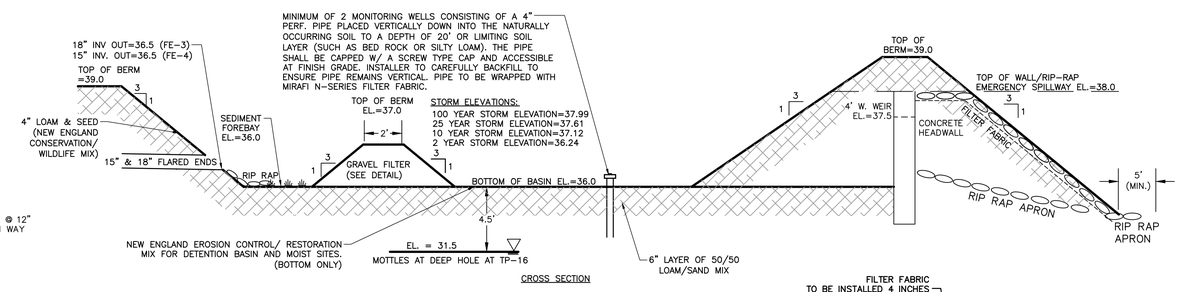
GRAVEL FILTER

N.T.S.



INFILTRATION BASIN #1

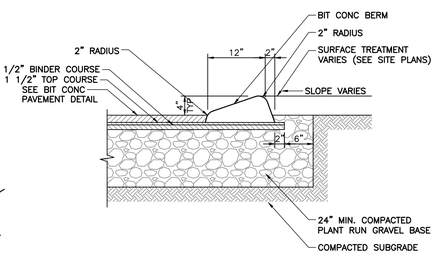
N.T.S.



CROSS SECTION

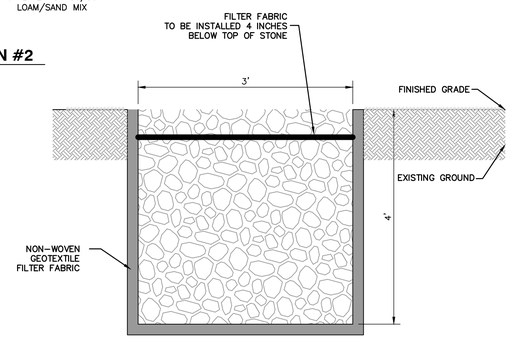
INFILTRATION BASIN #2

N.T.S.



BITUMINOUS CONCRETE CAPE COD BERM DETAIL

N.T.S.



CONSTRUCTION NOTES

1. INFILTRATION TRENCH SHALL BE 4' WIDE X 3' DEEP X' 110' LONG.
2. FILL IN TRENCH WITH 3/4" AGGREGATE AND FILTER FABRIC WITH DRAINAGE COMPOSITE OR AGGREGATE BACK DRAIN SYSTEM

STONE INFILTRATION TRENCH

N.T.S.

REVISION RECORD

NO	DATE	DESCRIPTION

31 Bellows Road
Raynham, MA 02767
Ph: 774.501.2176
www.cecinc.com

Civil & Environmental Consultants, Inc.

BELL FARM ESTATES
ASSESSORS MAP 17
LOTS 135, 109, 208
MILK STREET, DIGHTON, MA

COMMONWEALTH OF MASSACHUSETTS
CHRISTOPHER J VANDENBERGHE
CIVIL
No. 54007
REGISTERED PROFESSIONAL ENGINEER
3/3/25

TOWN OF DIGHTON
PLANNING BOARD
APPROVAL UNDER THE SUBDIVISION CONTROL LAW REQUIRED

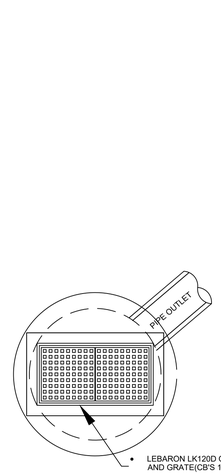
DATE

DETAIL SHEET

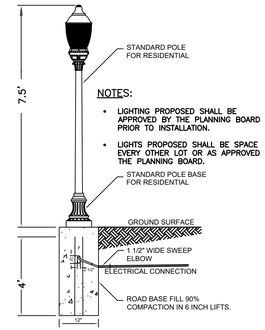
DRAWN BY:	AMB
CHECKED BY:	CJV
PROJECT NO:	315-430
APPROVED BY:	DSK
DATE:	FEBRUARY 2025
DWG SCALE:	AS SHOWN

DRAWING NO.:
C800
SHEET 31 OF 35

P:\310-000\315-430\-CADD\Dwg\CV01\315430-CV01-C800.dwg[C800] LS:(2/26/2025 - cvandenberghe) — LP: 2/27/2025 9:14 AM

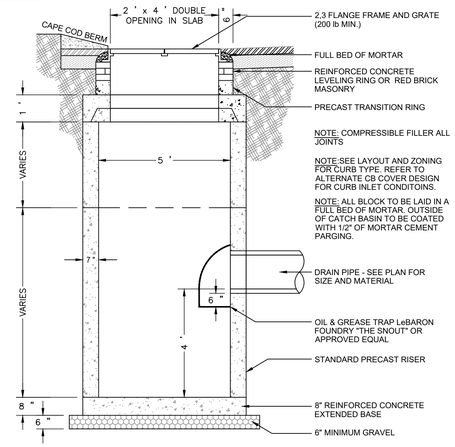


PLAN VIEW



TYPICAL LAMP POST WITH LIGHT

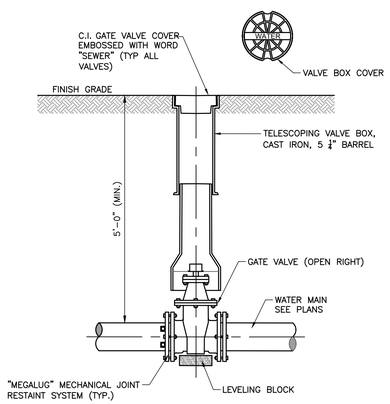
N.T.S.



5' DIAMETER DOUBLE GRATE CATCH BASIN

NOT TO SCALE

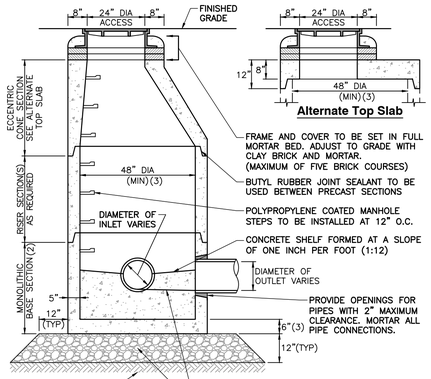
NOTES:
1. CB'S 1A AND 1B SHALL HAVE DOUBLE CASCADE GRATES (LEBARON LK120D OR LK121D) SEE SHEET C302.
2. CB 7A SHALL HAVE A DOUBLE FRAME AND GRATE



NOTE:
ALL NEW SERVICES SHALL BE EQUIPPED WITH AN APPROVED TYPE OF DCVA AND GATE VALVE IMMEDIATELY FOLLOWING THE METER SETTING ON THE HOUSE SIDE, TO ACT AS A BACK VALVE AND PREVENT THE HOUSE PIPING FROM EMPTYING WHILE THE METER IS BEING CHANGED OR FOR OTHER WORK ON THE SERVICE PIPE. VALVES MANUFACTURED TO CONFORM IN ALL RESPECTS WITH FEDERAL SPECIFICATIONS WW-V-54 TYPE I CLASS A AS AMENDED TO DATE SHALL QUALIFY AS AN APPROVED TYPE.

GATE VALVE

N.T.S.

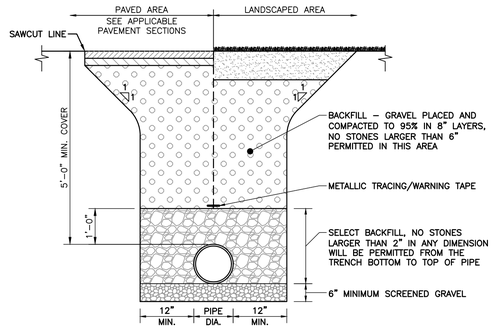


NOTES

1. STRUCTURE TO BE PRECAST CONCRETE, MINIMUM 4,000 PSI. ALL SECTIONS TO BE DESIGNED TO MEET OR EXCEED HS-20 LOADING.
2. BASE TO BE SINGLE POUR MONOLITHIC SECTION.
3. 60" (5'-0") INSIDE DIAMETER FOR ALL MANHOLE DEPTHS GREATER THAN 20 FEET. 6" MINIMUM WALL THICKNESS AND 8" MINIMUM BASE THICKNESS FOR 5'-0" DIAMETER PRECAST MANHOLE.

DRAIN MANHOLE

N.T.S.

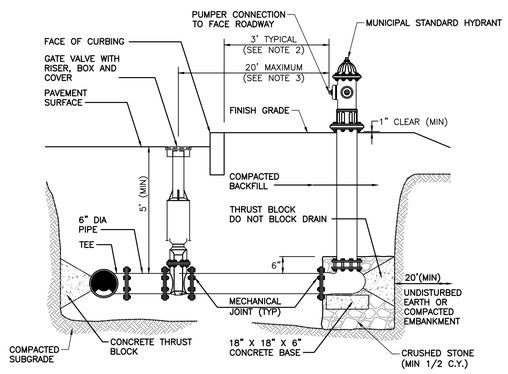


CONSTRUCTION NOTES

1. WHERE UTILITY TRENCHES ARE CONSTRUCTED THROUGH DETENTION BASIN BERMS OR OTHER SUCH SPECIAL SECTIONS, PLACE TRENCH BACKFILL WITH MATERIALS SIMILAR TO THE SPECIAL SECTION REQUIREMENTS.
2. USE METALLIC TRACING/WARNING TAPE OVER ALL PIPES.

CEMENT LINED DUCTILE IRON (CLDI) PIPE TRENCH (WATER MAIN)

N.T.S.

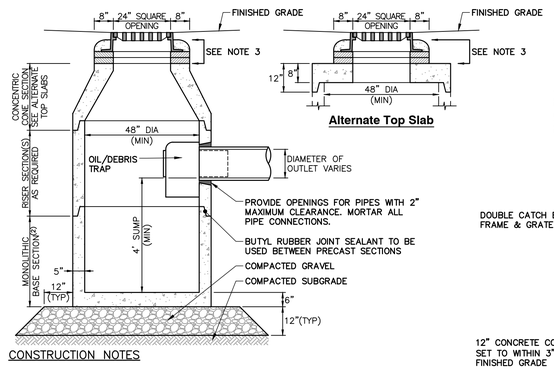


CONSTRUCTION NOTES

1. CONCRETE THRUST BLOCKS TO BE USED ONLY WHERE THEY CAN BEAR ON UNDISTURBED EARTH, AS SHOWN. USE CLAMPS AND TIE RODS OR OTHER ACCEPTABLE METHODS OF JOINT RESTRAINT WHERE SOIL CONDITIONS PROHIBIT THE USE OF THRUST BLOCKS.
2. HYDRANT IN SIDEWALK AREAS TO BE LOCATED TO PROVIDE MINIMUM CLEAR SIDEWALK PASSAGE WIDTH OF THREE (3) FEET AT HYDRANT. CONFIRM WITH LOCAL MUNICIPAL STANDARD.
3. GATE VALVE TO BE PLACED WITHIN 20-FEET OF HYDRANT IN ACCORDANCE WITH NFPA 24-17.7.

FIRE HYDRANT

N.T.S.

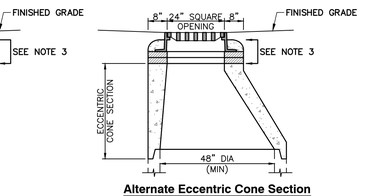


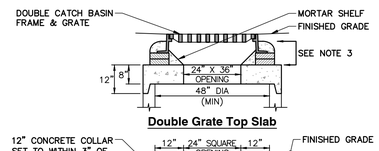
CONSTRUCTION NOTES

1. STRUCTURE TO BE PRECAST CONCRETE, MINIMUM 4,000 PSI. ALL SECTIONS TO BE DESIGNED TO MEET OR EXCEED HS-20 LOADING.
2. BASE TO BE SINGLE POUR MONOLITHIC SECTION.
3. FRAME AND GRATE TO BE SET IN FULL MORTAR BED. ADJUST TO GRADE WITH CLAY BRICK AND MORTAR. MAXIMUM OF FIVE BRICK COURSES.
4. PROVIDE DOGHOUSE OPENING FOR PIPES WITH 2" MAXIMUM CLEARANCE TO OUTSIDE OF PIPE. TOP SLAB SHALL NOT REST DIRECTLY ON THE PIPE. GROUT ALL CONNECTIONS WITH NON-SHRINK GROUT.

CATCH BASIN WITH OIL/DEBRIS TRAP

N.T.S.





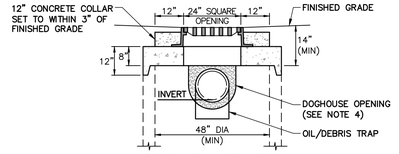
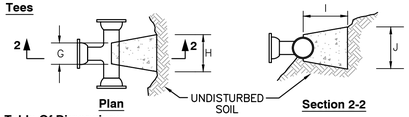


Table Of Dimensions

TEES	G	H	I	J	TEES	G	H	I	J
6"x 6"x 6"	12"	24"	24"	18"	12"x 12"x 6"	12"	24"	24"	18"
8"x 8"x 6"	"	"	"	"	12"x 12"x 8"	"	"	"	24"
8"x 8"x 8"	"	"	"	24"	12"x 12"x 12"	"	36"	"	36"

Tees

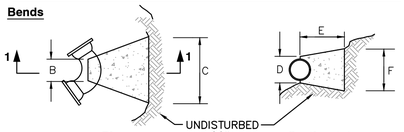


Plan Section 2-2

Table Of Dimensions

BENDS	B	C	D	E	F	BENDS	B	C	D	E	F
6" 111/4"	8"	15"	12"	24"	12"	6" 45°	8"	30"	12"	24"	14"
6" 221/2"	"	19"	"	"	13"	6" 90°	"	30"	"	"	27"
8" 111/4"	"	20"	"	"	12"	8" 45°	"	30"	"	"	24"
8" 221/2"	"	22"	"	"	17"	8" 90°	"	38"	"	"	36"
12" 111/4"	"	30"	"	"	15"	12" 45°	"	40"	"	"	40"
12" 221/2"	"	35"	"	"	25"	12" 90°	"	60"	"	"	52"

Bends



Plan Section 1-1

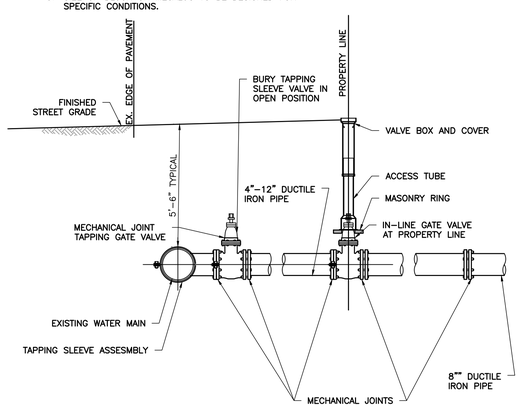
CONSTRUCTION NOTES

1. PROVIDE BLOCKS FOR TAPPING SLEEVES, DEAD ENDS, GATE VALVES, AND VERTICAL BENDS – SAME SIZE AS REQUIRED FOR TEES. PROVIDE ANCHOR RODS AT VERTICAL BENDS AND GATE VALVES.
2. CONCRETE SHALL NOT BE PLACED AGAINST PIPE BEYOND FITTING.
3. CONCRETE SHALL BE 3000 PSI-TYPE I.

CONCRETE THRUST BLOCK

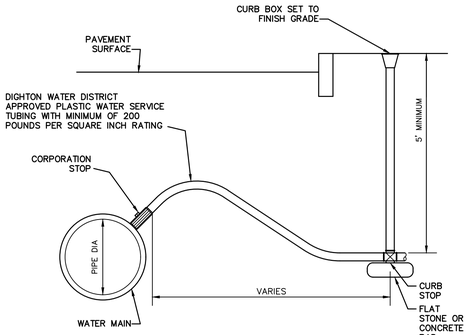
N.T.S.

NOTE:
1. CONCRETE THRUST BLOCK TO BE USED ONLY WHERE IT WILL BEAR ON UNDISTURBED EARTH.
2. USE RESTRAINED JOINT FITTINGS OR TIE RODS WHERE CONCRETE THRUST BLOCK IS UNACCEPTABLE.
3. SIZE OF BLOCK OR MEGALUG TO BE DESIGNED FOR SPECIFIC CONDITIONS.



WATER CONNECTION TO EXISTING MAIN

N.T.S.

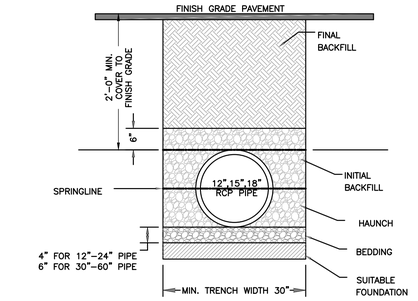


CONSTRUCTION NOTES

1. INSTALLATION SHALL CONFORM WITH DIGHTON WATER DISTRICT SPECIFICATIONS AND STANDARDS.

CORPORATION / CURB STOP WITH BOX

N.T.S.



NOTE:
USE MASSDOT SPECIFIED MATERIAL, CRUSHED STONE M2.01.4 – 3/4" STONE, FOR ALL UTILITY TRENCH BACKFILL MATERIAL.

DRAINAGE PIPE TRENCH DETAIL

N.T.S.

COMMONWEALTH OF MASSACHUSETTS
CHRISTOPHER J VANDENBERGHE
CIVIL
No. 54607
REGISTERED PROFESSIONAL ENGINEER
3/3/25

TOWN OF DIGHTON
PLANNING BOARD
APPROVAL UNDER THE SUBDIVISION CONTROL LAW REQUIRED

DATE

REVISION RECORD

NO	DATE	DESCRIPTION

31 Bellows Road
Raynham, MA 02767
Ph: 774.501.2176
www.cecinc.com
Civil & Environmental Consultants, Inc.

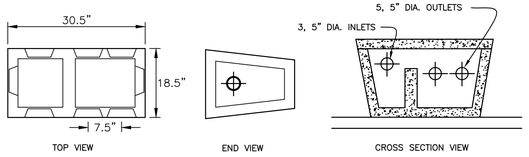
BELL FARM ESTATES
ASSESSOR'S MAP 17
LOTS 135, 109, 208
MILK STREET, DIGHTON, MA

DETAIL SHEET

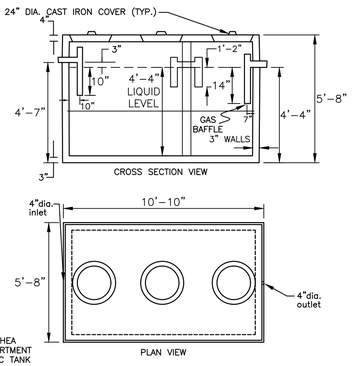
DATE:	FEBRUARY 2025
DWG SCALE:	AS SHOWN
PROJECT NO:	315-430
DRAWN BY:	AMB
CHECKED BY:	CJV
APPROVED BY:	DSK

DRAWING NO.:
C801
SHEET 32 OF 35

P:\310-000\315-430\-CAD01\Dwg\CV01\315430-CV01-C800.dwg(C801) LS:(2/26/2025 - cvandenberghe) - LP: 2/27/2025 9:14 AM



H-20 DISTRIBUTION BOX
N.T.S.



NOTE:
TANK SHALL BE A SHEA CONCRETE 2-COMPARTMENT 1,500 GALLON SEPTIC TANK OR APPROVED EQUAL

2-COMPARTMENT 1,500 GALLON SEPTIC TANK
N.T.S.

ANTICIPATED DESIGN CALCULATIONS FOR INDIVIDUAL SEPTIC SYSTEMS:

1.) ESTIMATED DAILY FLOW:
3 BEDROOMS X 110 GPD/BEDROOM = 330 GPD

2.) REQUIRED SEPTIC TANK CAPACITY: (PER TITLE 5)
EACH HOME TO HAVE THEIR OWN 1,500 GALLON 2-COMPARTMENT SEPTIC TANK

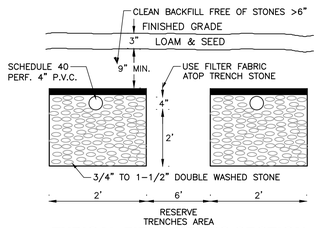
3.) 2'D X 2'W TRENCHES REQUIRED: 0.68 GPD/SF (ASSUME LOAMY SAND-CLASS I PER TP DATA)
330 GPD / 0.68 GPD/S.F = 485 S.F. / 6 S.F./L.F. = 81 L.F.

4.) USE (2) 2'D X 2'W X 42'L TRENCHES = 84 L.F.
OR USE (3) 2'D X 2'W X 28'L TRENCHES = 84 L.F.

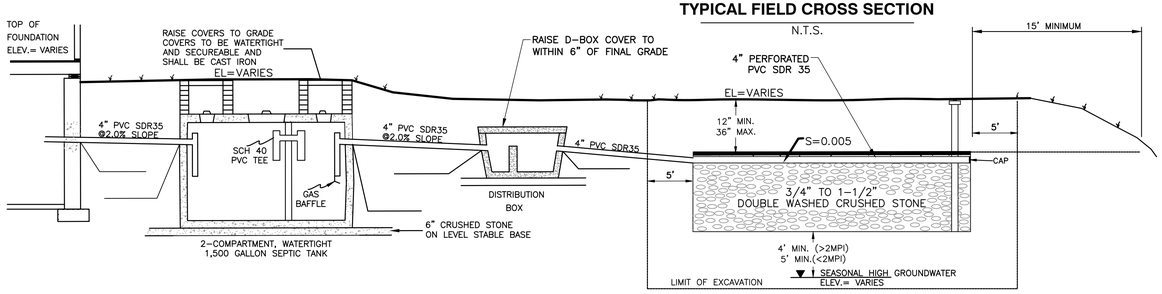
5.) USING (2) TRENCHES - LEACH AREA PROVIDED: 14'W X 42'L FIELD PLUS RESERVE AREA =588 S.F.
USING (3) TRENCHES - LEACH AREA PROVIDED: 22'W X 28'L FIELD PLUS RESERVE AREA= 616 S.F.

6.) CAPACITY PROVIDED: 84 L.F X 6 S.F/L.F =504 S.F
504 S.F X 0.68 GPD/S.F= 343 GPD

7.) EACH LOT WILL REQUIRE A SEPTIC SYSTEM DESIGN. INDIVIDUAL LOT SEPTIC SYSTEM DESIGNS MAY VARY FROM THE ABOVE SIZING CALCULATIONS.



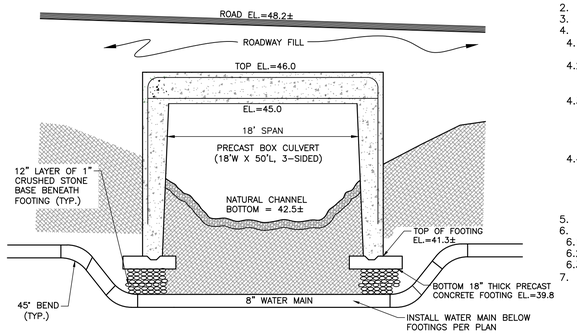
TYPICAL FIELD CROSS SECTION
N.T.S.



TYPICAL SEPTIC SYSTEM PROFILE
N.T.S.

BOX CULVERT DESIGN NOTES

1. STRUCTURAL ENGINEERED PLANS & DETAILS TO BE PROVIDED PRIOR TO CONSTRUCTION
2. ALL UNSUITABLE MATERIAL SUCH AS ORGANIC LAYERS SHALL BE REMOVED BENEATH FOOTING
3. BOX CULVERT CALCULATIONS PER MASSACHUSETTS STREAM CROSSING GUIDELINES:
   - OPENNESS RATIO = (CROSS SECTIONAL AREA) / LENGTH > 0.82
     = (2.5' X 18') / 50' = 0.90
   - MIN. SPAN= 1.2 X BANKFULL WIDTH = 1.2 X 8'* = 9.6' (USE 18')
     *AVERAGE WIDTH OF TOP OF BANK.
4. EXISTING STREAM BED TO BE RESTORED TO LINE AND GRADE AFTER INSTALLATION OF WATER MAIN..

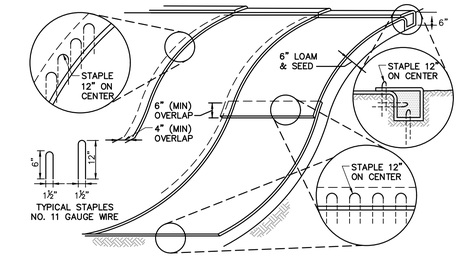


BOX CULVERT FOR STREAM CROSSING LONGITUDINAL SECTION
N.T.S.

BOX CULVERT FOR STREAM CROSSING CONSTRUCTION SEQUENCE

THE CULVERT SHOULD BE INSTALLED DURING THE LOW FLOW PERIOD (APPROXIMATELY JUNE TO OCTOBER). OWNER/CONTRACTOR MUST NOTIFY CONSERVATION COMMISSION 1 WEEK IN ADVANCE OF PROPOSED COMMENCEMENT TO ENSURE SUITABLE CONDITIONS ARE PRESENT AND SHALL FOLLOW THIS CONSTRUCTION SEQUENCE AS CLOSELY AS POSSIBLE. THE CULVERT INSTALLATION IS EXPECTED TO TAKE 1 WEEK, AND SHOULD BE DONE IS CONJUNCTION WITH THE RETAINING WALLS TO MINIMIZE POTENTIAL DISTURBANCE TO THE WETLANDS.

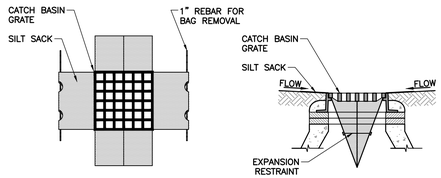
1. INSTALL SILT FENCE PER PLANS.
2. CLEAR AND GRUB UNSUITABLE SOILS
3. INSTALL WATER MAIN PER PLANS, AND RESTORE STREAM CHANNEL LINES AND GRADES.
4. EXCAVATE FOR NEW CULVERT AND WALL FOOTINGS PER STRUCTURAL PLANS.
   - 4.1. EXCAVATED AREA SHOULD EXTEND 24" HORIZONTALLY BEYOND THE EDGE OF THE PROPOSED CULVERT AND WALL FOUNDATIONS.
   - 4.2. SCRAPE BOTTOM OF FOOTING TRENCH WITH NON-TOOTHED MACHINE, IMMEDIATELY FOLLOWED BY PLACEMENT OF A REINFORCING GEOTEXTILE AND A 12" LAYER OF 1" SIZE CRUSHED STONE, IF REQUIRED.
   - 4.3. CONTRACTOR SHALL UTILIZE THE STONE FOOTING TRENCH FOR GROUNDWATER CONTROL IF NECESSARY. A SUMP MAY BE DUG ADJACENT TO THE UPSTREAM END OF FOOTING TRENCHES WHERE A PUMP MAY BE INSTALLED TO MAINTAIN WATER LEVELS BELOW THE FOOTINGS. THE PUMP DISCHARGE SHALL BE ROUTED TO A TEMPORARY STRAW-BALE FILTER AT DOWNGRADIENT END.
   - 4.4. WHERE WORK IS TO BE DONE DURING NO FLOW/DRY CONDITIONS, IT IS NOT ANTICIPATED THAT TEMPORARY BY-PASS PIPING OR PUMPS SHALL BE NECESSARY. HOWEVER, CONTRACTOR SHALL BE PREPARED TO IMPLEMENT A CONTINGENCY PLAN IF WEATHER CONDITIONS ARISE (SUCH AS A HURRICANE FORECAST) TO PROVIDE AN OPEN STREAM CHANNEL WITH A CRUSHED STONE CHECK DAM AND STRAW BALES/SILT FENCE AT OUTLET END OF STREAM.
5. INSTALL FOOTINGS PER STRUCTURAL CULVERT PLANS.
6. INSTALL BOX CULVERT AND BACKFILL INTERIOR AS SECTIONS ARE PLACED.
   - 6.1. COMPACT BED MATERIAL.
   - 6.2. WASH BED MATERIAL TO ENSURE THAT FINE MATERIALS FILL VOIDS.
   - 6.3. BY-PASS PIPING MAY BE REMOVED, IF ANY.
7. BACKFILL WALLS AND RESTORE/CONSTRUCT WELL-GRADED BANKS FOR ROUGHNESS AND PASSAGE BY SMALL WILDLIFE AND IN-STREAM BANK-EDGE HABITAT. USING NATIVE SUBSOIL OVERLAID WITH 6" LAYER OF COMPOST, SAND AND LOAM MIXTURE (EQUAL PARTS). BLEND CONSTRUCTED BANKS INTO EXISTING BANKS.



NOTES:

1. BEGIN AT THE TOP OF BLANKET INSTALLATION AREA BY ANCHORING BLANKET IN A SIX (6) INCH DEEP TRENCH. BACKFILL AND COMPACT TRENCH AFTER STAPLING.
2. ROLL THE BLANKET DOWN THE SLOPE IN THE DIRECTION OF THE WATER FLOW.
3. THE EDGES OF BLANKETS MUST BE STAPLED WITH APPROXIMATELY FOUR (4) INCH OVERLAP WHERE TWO (2) OR MORE STRIP WIDTHS ARE REQUIRED.
4. WHEN BLANKETS MUST BE SPLICED DOWN THE SWALE, PLACE UPPER BLANKET END OVER LOWER END WITH SIX (6) INCH MINIMUM OVERLAP AND STAPLE BOTH TOGETHER.
5. MORE FASTENERS MAY BE REQUIRED DUE TO BLANKET COMPOSITION, SOIL TYPE, SURFACE UNIFORMITY AND SLOPE STEEPNESS. METHOD OF INSTALLATION SHALL BE AS PER MANUFACTURER'S RECOMMENDATIONS.
6. TO BE PLACED ON SLOPES 3:1 OR GREATER, AS SHOWN ON PLANS.

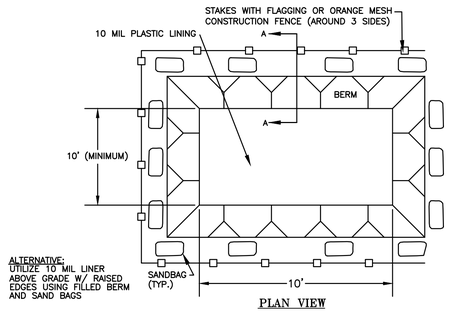
EROSION CONTROL BLANKET ON SLOPE
N.T.S.



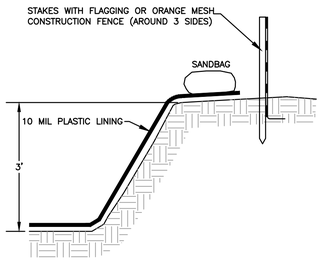
NOTES

1. INSTALL SILT SACKS IN ALL CATCH BASINS WHERE INDICATED ON THE SITE PLANS BEFORE COMMENCING WORK OR IN PAVED AREAS AFTER THE BINDER COURSE IS PLACED AND EROSION CONTROL BARRIERS HAVE BEEN REMOVED.
2. GRATE TO BE PLACED OVER SILT SACK.
3. SILT SACKS SHALL BE INSPECTED PERIODICALLY AND AFTER ALL STORM EVENTS. CLEANING OR REPLACEMENT SHALL BE PERFORMED AS NEEDED. MAINTAIN SILT SACKS UNTIL UPSTREAM AREAS HAVE BEEN PERMANENTLY STABILIZED.

SILT SACK INLET PROTECTION
N.T.S.

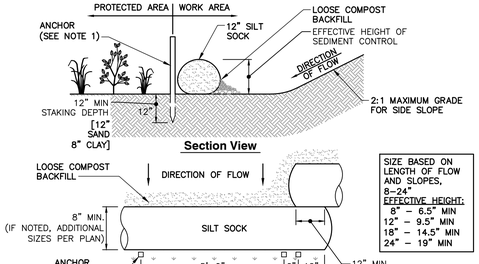


CONCRETE WASHOUT PIT
NOT TO SCALE



CROSS-SECTION A-A

NOT TO SCALE

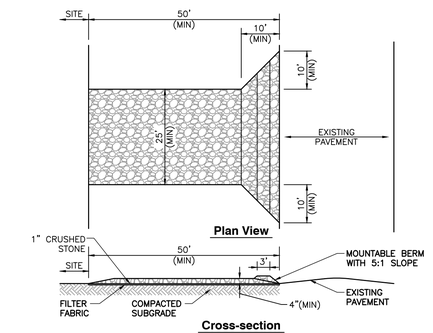


SIZE BASED ON LENGTH OF FLOW AND SLOPES,
8-24"
EFFECTIVE HEIGHT:
8" - 6.5" MIN
12" - 9.5" MIN
18" - 14.5" MIN
24" - 19" MIN

NOTES

1. ANCHOR TO BE A 2" X 2" X 36" HARD WOOD STAKE, OR APPROVED EQUAL.
2. COMPOST FOR SILT SOCK FILL MATERIAL TO BE PROVIDED BY THE MANUFACTURER IN CONJUNCTION WITH THE ENGINEER TO PROVIDE THE REQUIRED REMOVAL OF SEDIMENT OR OTHER POLLUTANTS FROM RUNOFF.
3. COMPOST MATERIAL SHALL BE DISPERSED ON SITE, AS DETERMINED BY THE LOCAL CONSERVATION AGENT OR THE DESIGN ENGINEER.
4. SILT SOCK SHALL BE INSPECTED PER LOCAL AND STATE REQUIREMENTS. REPAIR OR REPLACEMENT SHALL BE PERFORMED PROMPTLY, AS NEEDED.
5. METHOD OF INSTALLATION SHALL BE AS PER MANUFACTURER'S RECOMMENDATIONS.

SILT SOCK EROSION CONTROL BARRIER
N.T.S.



NOTES:

1. ENTRANCE WIDTH SHALL BE A TWENTY-FIVE (25) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
2. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH SHALL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY. PERIODIC INSPECTION AND MAINTENANCE SHALL BE PROVIDED AS NEEDED.
3. STABILIZED CONSTRUCTION ENTRANCE SHALL BE REMOVED PRIOR TO FINAL FINISHED MATERIALS BEING INSTALLED.

STABILIZED CONSTRUCTION EXIT
N.T.S.

COMMONWEALTH OF MASSACHUSETTS
CHRISTOPHER J. VANDENBERGHE
CIVIL
No. 54907
REGISTERED PROFESSIONAL ENGINEER
3/3/25

TOWN OF DIGHTON
PLANNING BOARD
APPROVAL UNDER THE SUBDIVISION CONTROL LAW REQUIRED

DATE

REVISION RECORD

NO	DATE	DESCRIPTION

31 Bellows Road
Raynham, MA 02767
Ph: 774.501.2176
www.cecinc.com
Civil & Environmental Consultants, Inc.

BELL FARM ESTATES
ASSESSOR'S MAP 17
LOTS 135, 109, 208
MILK STREET, DIGHTON, MA

DETAIL SHEET

DATE:	FEBRUARY 2025	DRAWN BY:	AMB
DWG SCALE:	AS SHOWN	CHECKED BY:	CJV
PROJECT NO:			315-430
APPROVED BY:			DSK

DRAWING NO.: C802

SHEET 33 OF 35

P:\310-0001\315-430\-CADD\Dwg\CIVIL\315430-CIVIL-C800.dwg[C802] LS:(2/26/2025 - cvandenberghe) - LP: 2/27/2025 9:14 AM

OBSERVATION HOLE LOG (SEPTIC TEST PITS)

TEST PIT # S1 GND. EL. 41.9
DATE: 10/12/2022 GW. EL. 38.9
TEST BY: MICHAEL TORTORA
WITNESSED BY: TODD PILLING

DEPTH (IN)	ELEV (NAD88)	SOIL HORIZON	SOIL COLOR	SOIL TEXTURE	OTHER
0	41.9				
		Ap	10YR3/2	LOAMY SAND	
12	40.9				
		Bw	10YR5/6	LOAMY SAND	
24	39.9				
		C	7.5YR5/3	FINE LOAMY SAND	
120	31.9				

MOTTLING OBSERVED @ 36"
STANDING WATER OBSERVED @ 120"
PERC HOLE DEPTH 60"
PERC RATE 6 MIN/INCH

OBSERVATION HOLE LOG (SEPTIC TEST PITS)

TEST PIT # S2 GND. EL. 40.0
DATE: 10/12/2022 GW. EL. 37.0
TEST BY: MICHAEL TORTORA
WITNESSED BY: TODD PILLING

DEPTH (IN)	ELEV (NAD88)	SOIL HORIZON	SOIL COLOR	SOIL TEXTURE	OTHER
0	40.4				
		Ap	10YR3/2	LOAMY SAND	
18	38.9				
		Bw	10YR5/6	LOAMY SAND	
36	37.4				
		C	7.5YR5/3	SANDY LOAM	
114	30.9				
		C2	7.5YR5/3	SAND	
120	30.4				

MOTTLING OBSERVED @ 36"
STANDING WATER OBSERVED @ 120"
PERC HOLE DEPTH 54"
PERC RATE 6 MIN/INCH

OBSERVATION HOLE LOG (SEPTIC TEST PITS)

TEST PIT # S3 GND. EL. 38.5
DATE: 10/12/2022 GW. EL. 36.5
TEST BY: MICHAEL TORTORA
WITNESSED BY: TODD PILLING

DEPTH (IN)	ELEV (NAD88)	SOIL HORIZON	SOIL COLOR	SOIL TEXTURE	OTHER
0	38.6				
		Ap	10YR3/2	LOAMY SAND	
12	37.6				
		Bw	10YR5/6	LOAMY SAND	
48	34.6				
		C	7.5YR5/3	FINE LOAMY SAND	
120	28.6				

MOTTLING OBSERVED @ 24"
WEEPING OBSERVED @ 108"
PERC HOLE DEPTH 54"
PERC RATE 27 MIN/INCH

OBSERVATION HOLE LOG (SEPTIC TEST PITS)

TEST PIT # S4 GND. EL. 40.9
DATE: 10/12/2022 GW. EL. 37.9
TEST BY: MICHAEL TORTORA
WITNESSED BY: TODD PILLING

DEPTH (IN)	ELEV (NAD88)	SOIL HORIZON	SOIL COLOR	SOIL TEXTURE	OTHER
0	40.9				
		Ap	10YR3/2	LOAMY SAND	
8	40.2				
		Bw	10YR5/6	LOAMY SAND	
30	38.4				
		C	7.5YR6/3	SAND	
120	30.9				

MOTTLING OBSERVED @ 36"
STANDING WATER OBSERVED @ N/A
PERC HOLE DEPTH 48"
PERC RATE 29 MIN/INCH

OBSERVATION HOLE LOG (SEPTIC TEST PITS)

TEST PIT # S5 GND. EL. 42
DATE: 10/12/2022 GW. EL. 36
TEST BY: MICHAEL TORTORA
WITNESSED BY: TODD PILLING

DEPTH (IN)	ELEV (NAD88)	SOIL HORIZON	SOIL COLOR	SOIL TEXTURE	OTHER
0	42				
		Ap	10YR3/2	LOAMY SAND	
12	41				
		Bw	10YR5/6	LOAMY SAND	
30	39.5				
		C	7.5YR5/3	SAND	
96	34				

MOTTLING OBSERVED @ 30"
STANDING WATER OBSERVED @ 84"
PERC HOLE DEPTH 48"
PERC RATE <2 MIN/INCH

OBSERVATION HOLE LOG (SEPTIC TEST PITS)

TEST PIT # S6 GND. EL. 45.6
DATE: 10/12/2022 GW. EL. 40.6
TEST BY: MICHAEL TORTORA
WITNESSED BY: TODD PILLING

DEPTH (IN)	ELEV (NAD88)	SOIL HORIZON	SOIL COLOR	SOIL TEXTURE	OTHER
0	45.6				
		Ap	10YR3/2	LOAMY SAND	
12	44.6				
		C	7.5YR5/3	COBBLY SAND	
120	35.6				

MOTTLING OBSERVED @ 60"
STANDING WATER OBSERVED @ N/A
PERC HOLE DEPTH 54"
PERC RATE <2 MIN/INCH

OBSERVATION HOLE LOG (SEPTIC TEST PITS)

TEST PIT # S7 GND. EL. 43
DATE: 10/12/2022 GW. EL. 38
TEST BY: MICHAEL TORTORA
WITNESSED BY: TODD PILLING

DEPTH (IN)	ELEV (NAD88)	SOIL HORIZON	SOIL COLOR	SOIL TEXTURE	OTHER
0	48				
		Ap	10YR3/2	LOAMY SAND	
16	41.6				
		C	7.5YR5/3	SAND	
108	34				

MOTTLING OBSERVED @ 60"
STANDING WATER OBSERVED @ 100"
PERC HOLE DEPTH 54"
PERC RATE <2 MIN/INCH

OBSERVATION HOLE LOG (SEPTIC TEST PITS)

TEST PIT # S8 GND. EL. 45.6
DATE: 10/12/2022 GW. EL. 42.3
TEST BY: MICHAEL TORTORA
WITNESSED BY: TODD PILLING

DEPTH (IN)	ELEV (NAD88)	SOIL HORIZON	SOIL COLOR	SOIL TEXTURE	OTHER
0	45.6				
		Ap	10YR3/2	LOAMY SAND	
12	44.6				
		C	7.5YR5/3	SAND	
108	36.6				

MOTTLING OBSERVED @ 40"
STANDING WATER OBSERVED @ 102"
PERC HOLE DEPTH 48"
PERC RATE <2 MIN/INCH

OBSERVATION HOLE LOG (SEPTIC TEST PITS)

TEST PIT # S9 GND. EL. 51.9
DATE: 10/12/2022 GW. EL. 48.5
TEST BY: MICHAEL TORTORA
WITNESSED BY: TODD PILLING

DEPTH (IN)	ELEV (NAD88)	SOIL HORIZON	SOIL COLOR	SOIL TEXTURE	OTHER
0	51.9				
		Ap	10YR3/2	LOAMY SAND	
12	50.9				
		C	7.5YR5/3	SAND	
120	41.9				

MOTTLING OBSERVED @ 40"
STANDING WATER OBSERVED @ N/A
PERC HOLE DEPTH 48"
PERC RATE <2 MIN/INCH

OBSERVATION HOLE LOG (DRAINAGE TEST PITS)

TEST PIT # 1 GND. EL. 38.5
DATE: 8/16/2022 GW. EL. N/A
TEST BY: MICHAEL TORTORA
WITNESSED BY:

DEPTH (IN)	ELEV (NAD88)	SOIL HORIZON	SOIL COLOR	SOIL TEXTURE	OTHER
0	38.7				
		Ap		LOAMY SAND	
18	37.2				
		Bw		LOAMY SAND	
24	36.7				
		C		LOAMY SAND	
54	34.2				
		C2		SANDY LOAM	
120	28.7				

MOTTLING OBSERVED @ 24"
STANDING WATER OBSERVED @ N/A

OBSERVATION HOLE LOG (DRAINAGE TEST PITS)

TEST PIT # 2 GND. EL. 44.1
DATE: 8/16/2022 GW. EL. N/A
TEST BY: MICHAEL TORTORA
WITNESSED BY:

DEPTH (IN)	ELEV (NAD88)	SOIL HORIZON	SOIL COLOR	SOIL TEXTURE	OTHER
0	44.1				
		Ap		LOAMY SAND	
12	43.1				
		Bw		LOAMY SAND	
26	41.9				
		C		LOAMY SAND	
54	39.6				
		C2		SANDY LOAM	
120	34.1				

MOTTLING OBSERVED @ 24"
STANDING WATER OBSERVED @ N/A

OBSERVATION HOLE LOG (DRAINAGE TEST PITS)

TEST PIT # 3 GND. EL. 40.1
DATE: 8/16/2022 GW. EL. N/A
TEST BY: MICHAEL TORTORA
WITNESSED BY:

DEPTH (IN)	ELEV (NAD88)	SOIL HORIZON	SOIL COLOR	SOIL TEXTURE	OTHER
0	40.1				
		Ap		LOAMY SAND	
12	39.1				
		Bw		LOAMY SAND	
36	37.1				
		C		GRAVELLY SAND	
120	30.1				

MOTTLING OBSERVED @ 36"
STANDING WATER OBSERVED @ N/A

OBSERVATION HOLE LOG (DRAINAGE TEST PITS)

TEST PIT # 4 GND. EL. 40.4
DATE: 8/16/2022 GW. EL. N/A
TEST BY: MICHAEL TORTORA
WITNESSED BY:

DEPTH (IN)	ELEV (NAD88)	SOIL HORIZON	SOIL COLOR	SOIL TEXTURE	OTHER
0	40.4				
		Ap		LOAMY SAND	
12	39.4				
		Bw		LOAMY SAND	
24	38.4				
		C		SAND	
36	37.4				
		C2		SANDY LOAM	
60	35.4				
		C3		SAND	
120	30.4				

MOTTLING OBSERVED @ 36"
STANDING WATER OBSERVED @ N/A

OBSERVATION HOLE LOG (DRAINAGE TEST PITS)

TEST PIT # 5 GND. EL. 37
DATE: 8/16/2022 GW. EL. N/A
TEST BY: MICHAEL TORTORA
WITNESSED BY:

DEPTH (IN)	ELEV (NAD88)	SOIL HORIZON	SOIL COLOR	SOIL TEXTURE	OTHER
0	37				
		C		GRAVELLY SAND	
36	34				
108	28				

MOTTLING OBSERVED @ N/A
STANDING WATER OBSERVED @ N/A

OBSERVATION HOLE LOG (DRAINAGE TEST PITS)

TEST PIT # 6 GND. EL. 38.5
DATE: 8/16/2022 GW. EL. N/A
TEST BY: MICHAEL TORTORA
WITNESSED BY:

DEPTH (IN)	ELEV (NAD88)	SOIL HORIZON	SOIL COLOR	SOIL TEXTURE	OTHER
0	38.5				
		Ap		LOAMY SAND	
30	36				
		C		SAND	
120	28.5				

MOTTLING OBSERVED @ N/A
WEEPING OBSERVED @ 96"

OBSERVATION HOLE LOG (DRAINAGE TEST PITS)

TEST PIT # 7 GND. EL. 43.5
DATE: 8/16/2022 GW. EL. N/A
TEST BY: MICHAEL TORTORA
WITNESSED BY:

DEPTH (IN)	ELEV (NAD88)	SOIL HORIZON	SOIL COLOR	SOIL TEXTURE	OTHER
0	43.5				
		Ap		LOAMY SAND	
12	42.5				
		Bw		LOAMY SAND	
36	40.5				
		C		GRAVELLY SAND	
108	34.5				

MOTTLING OBSERVED @ 36"
WEEPING OBSERVED @ 84"

OBSERVATION HOLE LOG (DRAINAGE TEST PITS)

TEST PIT # 8 GND. EL. 43.8
DATE: 8/16/2022 GW. EL. N/A
TEST BY: MICHAEL TORTORA
WITNESSED BY:

DEPTH (IN)	ELEV (NAD88)	SOIL HORIZON	SOIL COLOR	SOIL TEXTURE	OTHER
0	43.8				
		Ap		LOAMY SAND	
12	42.8				
		Bw		LOAMY SAND	
30	41.3				
		C		SAND	
120	33.8				

MOTTLING OBSERVED @ 30"
STANDING WATER OBSERVED @ 84"

OBSERVATION HOLE LOG (DRAINAGE TEST PITS)

TEST PIT # 9 GND. EL. 48.1
DATE: 8/16/2022 GW. EL. N/A
TEST BY: MICHAEL TORTORA
WITNESSED BY:

DEPTH (IN)	ELEV (NAD88)	SOIL HORIZON	SOIL COLOR	SOIL TEXTURE	OTHER
0	48.1				
		Ap		LOAMY SAND	
24	46.1				
		Bw		LOAMY SAND	
30	45.6				
		C		SAND	
120	38.1				

MOTTLING OBSERVED @ 60"
STANDING WATER OBSERVED @ N/A

OBSERVATION HOLE LOG (DRAINAGE TEST PITS)

TEST PIT # 10 GND. EL. 47.1
DATE: 8/16/2022 GW. EL. N/A
TEST BY: MICHAEL TORTORA
WITNESSED BY:

DEPTH (IN)	ELEV (NAD88)	SOIL HORIZON	SOIL COLOR	SOIL TEXTURE	OTHER
0	47.1				
		Ap		LOAMY SAND	
12	46.1				
		Bw		LOAMY SAND	
30	44.6				
		C		SAND	
120	37.1				

MOTTLING OBSERVED @ 54"
STANDING WATER OBSERVED @ N/A

OBSERVATION HOLE LOG (DRAINAGE TEST PITS)

TEST PIT # 11 GND. EL. 47.8
DATE: 8/16/2022 GW. EL. N/A
TEST BY: MICHAEL TORTORA
WITNESSED BY:

DEPTH (IN)	ELEV (NAD88)	SOIL HORIZON	SOIL COLOR	SOIL TEXTURE	OTHER
0	47.8				
60	42.8				
		C		SAND	
120	37.8				

MOTTLING OBSERVED @ 66"
WEEPING OBSERVED @ 96"

OBSERVATION HOLE LOG (DRAINAGE TEST PITS)

TEST PIT # 12 GND. EL. 45.4
DATE: 8/17/2022 GW. EL. N/A
TEST BY: MICHAEL TORTORA
WITNESSED BY:

DEPTH (IN)	ELEV (NAD88)	SOIL HORIZON	SOIL COLOR	SOIL TEXTURE	OTHER
0	45.4				
		Ap		LOAMY SAND	
6	44.9				
		C		STONY SAND	
20	43.7				

MOTTLING OBSERVED @ N/A
STANDING WATER OBSERVED @ 114"

OBSERVATION HOLE LOG (DRAINAGE TEST PITS)

TEST PIT # 13 GND. EL. 44.8
DATE: 8/17/2022 GW. EL. N/A
TEST BY: MICHAEL TORTORA
WITNESSED BY:

DEPTH (IN)	ELEV (NAD88)	SOIL HORIZON	SOIL COLOR	SOIL TEXTURE	OTHER
0	44.8				
		Ap		LOAMY SAND	
6	44.3				
		Bw		LOAMY SAND	
42	41.3				
		C		STONY SAND	
120	34.8				

MOTTLING OBSERVED @ N/A
WEEPING OBSERVED @ 96"

OBSERVATION HOLE LOG (DRAINAGE TEST PITS)

TEST PIT # 14 GND. EL. 43.1
DATE: 8/16/2022 GW. EL. N/A
TEST BY: MICHAEL TORTORA
WITNESSED BY:

DEPTH (IN)	ELEV (NAD88)	SOIL HORIZON	SOIL COLOR	SOIL TEXTURE	OTHER
0	43.1				
		Ap		LOAMY SAND	
6	42.6				
		Bw		LOAMY SAND	
48	39.1				
		C		GRAVELLY SAND	
120	33.1				

MOTTLING OBSERVED @ 48"
STANDING WATER OBSERVED @ N/A

OBSERVATION HOLE LOG (DRAINAGE TEST PITS)

TEST PIT # 15 GND. EL. 38.5
DATE: 01/28/2025 GW. EL. N/A
TEST BY: CHRIS VANDENBERGHE
WITNESSED BY:

DEPTH (IN)	ELEV (NAD88)	SOIL HORIZON	SOIL COLOR	SOIL TEXTURE	OTHER
0	38.5				
		Ap		LOAMY SAND	
12	37.5				
		Bw		LOAMY SAND	
30	36				
		C		GRAVELLY SAND	
96	30.5				

MOTTLING OBSERVED @ N/A
STANDING WATER OBSERVED @

OBSERVATION HOLE LOG (DRAINAGE TEST PITS)

TEST PIT # 16 GND. EL. 36.0
DATE: 01/28/2025 GW. EL. 31.5
TEST BY: CHRIS VANDENBERGHE
WITNESSED BY:

DEPTH (IN)	ELEV (NAD88)	SOIL HORIZON	SOIL COLOR	SOIL TEXTURE	OTHER
0	36.0				
		Ap		LOAMY SAND	
8	35.3				
		C1		LOAMY SAND	
60	31.0				
		C2		GRAVELLY SAND	
96	28.0				

MOTTLING OBSERVED @ 54"
STANDING WATER OBSERVED @ N/A

TOWN OF DIGHTON
PLANNING BOARD
APPROVAL UNDER THE SUBDIVISION CONTROL LAW REQUIRED

DATE

COMMONWEALTH OF MASSACHUSETTS
CHRISTOPHER J VANDENBERGHE
CIVIL
No. 54907
REGISTERED PROFESSIONAL ENGINEER
3/3/25

REVISION RECORD

NO	DATE	DESCRIPTION

31 Bellows Road
Raynham, MA 02767
Ph: 774.501.2176
www.cecinc.com
Civil & Environmental Consultants, Inc.

BELL FARM ESTATES
ASSESSOR'S MAP 17
LOTS 135, 109, 208
MILK STREET, DIGHTON, MA

DETAIL SHEET

DATE:	FEBRUARY 2025	DRAWN BY:	AMB
DWG SCALE:	AS SHOWN	CHECKED BY:	CJV
PROJECT NO:			315-430
APPROVED BY:			DSK

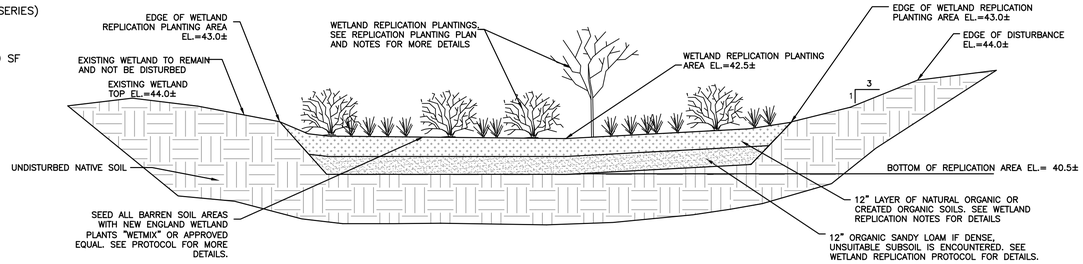
DRAWING NO.:
C803
SHEET 34 OF 35

P:\310-000\315-430\-CAD\Dwg\CIV01\315430-CIV01-C800.dwg[C803] LS:(2/26/2025 - cvandenberghe) - LP: 2/27/2025 9:14 AM

SUMMARY OF WETLAND ALTERATION AND REPLICATION:

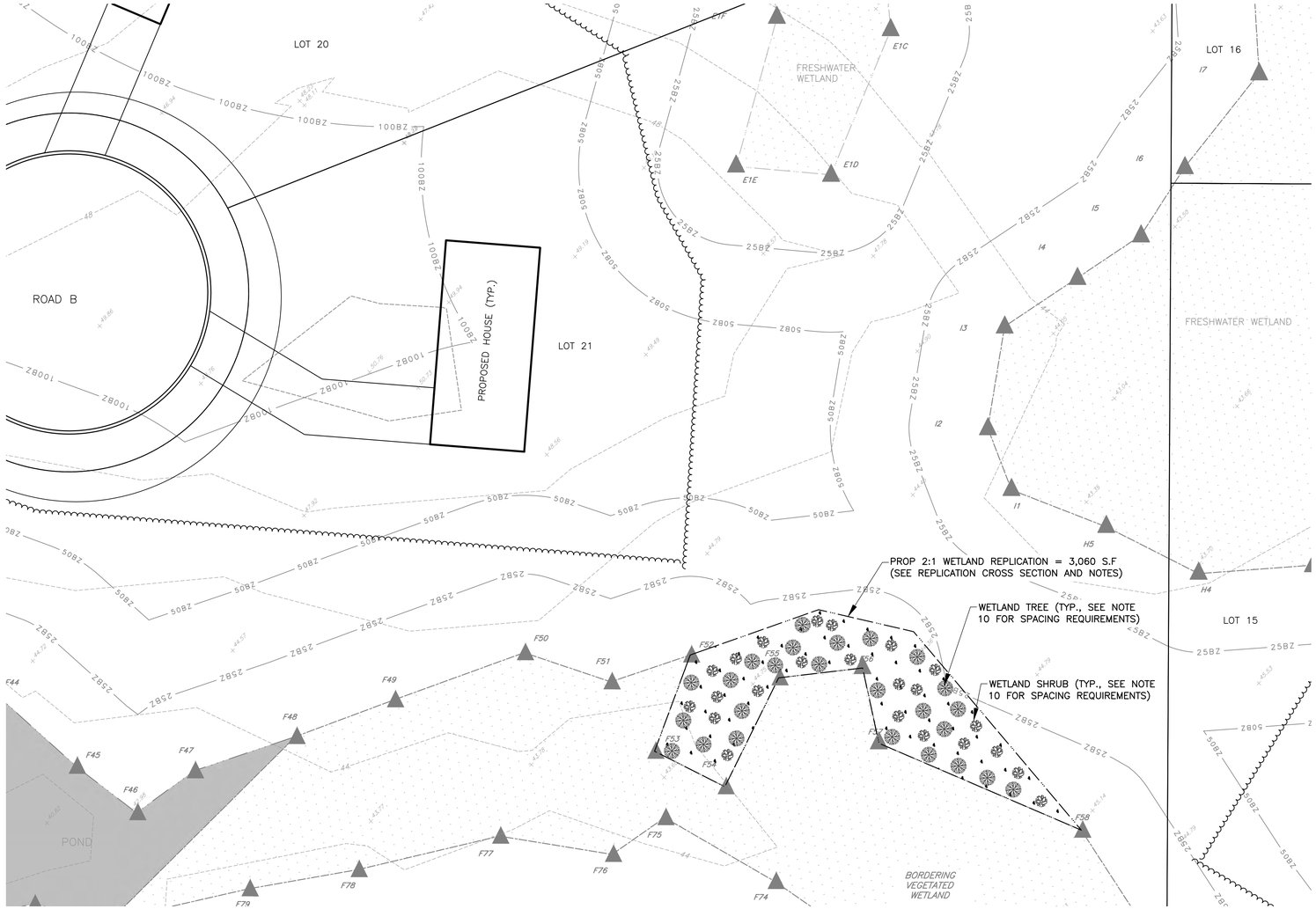
1,290 SF OF ALTERATION AT ROAD CROSSING (Z-SERIES)
290 SF SHADED BVW UNDER CULVERT
1,580 SF TOTAL ALTERATION

2:1 REPLICATION PROPOSED = 1,580 X 2 = 3,060 SF



WETLAND REPLICATION CROSS SECTION

NOT TO SCALE



WETLAND REPLICATION AREA-PLAN VIEW

1"=20'

WETLAND REPLICATION NOTES

1. ALL WORK SHALL BE OVERSEEN BY A QUALIFIED WETLAND BIOLOGIST/SOIL SCIENTIST.
2. AN EROSION CONTROL LINE WILL BE ESTABLISHED BETWEEN THE WETLAND REPLICATION AREA, ANY UPLAND AREAS, AND ANY OTHER UNDISTURBED WETLANDS. THESE CONTROLS SHALL REMAIN IN PLACE THROUGHOUT THE REPLICATION WORK AND THE SUBSEQUENT MONITORING PERIOD UNTIL SUCH A POINT THAT THE SITE HAS STABILIZED. THE WETLAND BIOLOGIST SHALL MAKE THE DETERMINATION FOR REMOVAL OF THE CONTROLS.
3. EROSION CONTROLS SHALL BE MONITORED FOR EFFICACY THROUGHOUT THE REPLICATION PROCESS. EROSION CONTROLS SHALL BE REPLACED AS NECESSARY.
4. IF ADDITIONAL SOIL EROSION AND SEDIMENT CONTROL MEASURES ARE DEEMED NECESSARY BY THE OVERSEEING BIOLOGIST, MASSDEP, OR THE DIGHTON CONSERVATION COMMISSION, SUCH MEASURES WILL BE IMPLEMENTED.
5. THE REPLICATION PROTOCOL SHOULD TAKE PLACE DURING THE LOW GROUND WATER PERIOD, TYPICALLY BETWEEN JULY 1ST AND OCTOBER 31ST.
6. ALL UPLAND SOIL MATERIAL SHALL BE REMOVED FROM WITHIN THE WETLAND REPLICATION AREA UP TO 4" BELOW THE ADJACENT EXISTING WETLAND GRADE, AS IDENTIFIED BY THE OVERSEEING WETLAND BIOLOGIST. SURROUNDING UPLAND SHALL BE GRADED TO 3:1 OR LESS SLOPE AND STABILIZED AS NECESSARY TO PREVENT EROSIVE LOSS OR MASS WASTING FROM OCCURRING.
7. UPLAND SOIL SHALL BE REMOVED BY USE OF A SMALL BACKHOE/MINI-EXCAVATOR POSITIONED ON THE UPLAND SIDE OF THE ENCROACHMENT. NO NEW DISTURBANCE TO THE EXISTING WETLAND WILL TAKE PLACE.
8. THE WETLAND REPLICATION AREA WILL CONTAIN A MINIMUM OF 4" OF HIGHLY ORGANIC, PLANTABLE SOIL AND MUST BE SUPPLEMENTED AS NEEDED TO MEET THIS REQUIREMENT.
9. FOLLOWING THE PLACEMENT OF HIGHLY ORGANIC SOIL MATERIAL, THE AREA SHALL BE TOPPED WITH A LOOSE STRAW MULCH AND SHALL BE INSPECTED BY THE OVERSEEING WETLAND BIOLOGIST TO CONFIRM THE AREAS OF CONCERN HAVE BEEN PROPERLY STABILIZED.
10. PLANTINGS IN THE WETLAND REPLICATION AREA SHALL BE OBTAINED FROM NURSERY STOCK THAT HAS BEEN RAISED IN HYDRIC CONDITIONS. SMALL MOUNDS OF HIGHLY ORGANIC MATERIAL MAY BE UTILIZED TO IMPROVE SURVIVABILITY OF PLANTINGS IF NECESSARY. PLANTINGS SHALL INCLUDE AN EQUAL COMBINATION OF THE FOLLOWING SHRUB AND TREE SPECIES. SHRUBS SHALL BE SPACED 6-FEET ON CENTER AND 2'-3' IN HEIGHT AFTER PLANTING. TREES SHALL BE 4'-5' AND SPACED 10-FEET ON CENTER:

    SHRUBS:

    SPICE BUSH (LINDERA BENZOIN)

    POSSUMHAW VIBURNUM (VIBURNUM NUDUM)

    ARROWOOD (VIBURNUM DENTATUM)

    ELDERBERRY (SAMBUCUS CANADENSIS)

    HIGHBUSH BLUEBERRY (VACCINIUM CORYMBOSUM)

    TREES:

    SWAMP WHITE OAK (QUERCUS BICOLOR)

    RED MAPLE (ACER RUBRUM)

    YELLOW BIRCH (BETULA ALLEGHANIENSIS)

    BLACK GUM (NYSSA SYLVATICA)

11. THE WETLAND REPLICATION AREA SHALL BE SEEDED WITH A NEW ENGLAND WETMIX (WETLAND SEED MIX) SEED MIX BY NEW ENGLAND WETLAND PLANTS, INC. OR SIMILAR AT A RATE OF AT LEAST 1LB / 2,500 SQ FT.
12. ANY PLANTINGS THAT FAIL TO SURVIVE 2 FULL GROWING SEASONS SHALL BE REPLACED IN KIND. NO FUTURE MOWING, CLEARING, CUTTING, TRIMMING, OR OTHER ALTERATIONS IS ALLOWED WITHOUT FIRST OBTAINING A PERMIT.
13. UPON STABILIZATION OF ALL DISTURBED AREAS, ALL NON-BIODEGRADABLE EROSION AND SEDIMENT CONTROLS SHALL BE REMOVED. ADDITIONALLY, ANY ACCUMULATED SEDIMENT SHALL BE REMOVED TO A SUITABLE UPLAND LOCATION, OUTSIDE OF ANY WETLANDS OR JURISDICTIONAL AREA.
14. A MONITORING REPORT SHALL BE PREPARED BY THE WETLAND BIOLOGIST AND SUBMITTED ANNUALLY FOR 2 YEARS FOLLOWING COMPLETION OF THE REPLICATION TO THE DIGHTON CONSERVATION COMMISSION AT THE CONCLUSION OF THE RESTORATION WORK.

—WETLAND TREE

—WETLAND SHRUB

COMMONWEALTH OF MASSACHUSETTS
CHRISTOPHER J VANDENBERGHE
CIVIL
No. 54907
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LOTS 135, 109, 208
MILK STREET, DIGHTON, MA

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APPROVED BY:	DSK

DRAWING NO.:
C804
SHEET 35 OF 35

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