

LAND SUBDIVISION - FORM F

Development Impact Report (DIR) PLANNING BOARD – Town of Medway, MA

OVERVIEW

The DIR is intended to serve as a guide to the applicant in formulating their development proposal, as well as a guide to the Planning Board in evaluating the proposed Subdivision Plan in the context of existing conditions and the Town's planning efforts. The DIR should be prepared as early in the design process as possible, even if certain aspects are unknown at that time.

The DIR seeks to raise the broad range of issues generally association with a subdivision development plan in a form and in language that is understandable to the layperson. The DIR shall identify and assess development impacts that could possibly be avoided or mitigated if recognized early in the development process. Other portions of the DIR request information that will help the Town plan ahead to provide adequate services in the future.

The DIR shall be filed with an application for approval of a Preliminary and a Definitive Subdivision Plan. It shall clearly and methodically assess the relationship of the proposed development to the natural, physical, and social environment of the surrounding area. In preparing the DIR, a systematic interdisciplinary approach shall be utilized to include professionals in the natural and social sciences and environmental design arts.

12/17/17

Date

1. Name of Proposed Subdivision: Town Line Estate
2. Location: 22 Populatic Street
3. Name of Applicant (s): Robert & Lisa Lapinsky
4. Brief Description of the Proposed Project: Two (2) Lot Residential Subdivision of
an existing 2.92 Ac. Parcel. Project will retain the existing Single-family home and add one (1)
Buildable Lot with private access drive.

-
5. Name of Individual Preparing this DIR Clifford Carlson, P.E.
- Address: 80 Woburn St, Andover, Ma Phone: (978) 390-1163

Professional Credentials: P.E. Reg. # 28343

SITE DESCRIPTION6. Total Site Acreage: 2.92

| Approximate Acreage | At Present | After Completion |
|---|-------------------|-------------------------|
| Meadow/brushland (<i>non-agricultural</i>) | | |
| Forested | 2.22 | 1.09 |
| Agricultural (<i>includes orchards, croplands, pasture</i>) | | |
| Wetlands | | |
| Water Surface Area | | |
| Flood Plain | | |
| Unvegetated (<i>rock, earth or fill</i>) | | |
| Roads, buildings and other impervious surfaces | 0.07 | 0.33 |
| Other (<i>indicate type</i>) Lawn/Yard | 0.63 | 1.50 |
| TOTAL | 2.92 | 2.92 |

7. Present permitted and actual land use by percentage of the site.

| Uses | Percentage |
|-----------------|-------------------|
| Industrial | |
| Commercial | |
| Residential | 100 |
| Forest | |
| Agricultural | |
| Other (specify) | |

8. List the zoning districts in which the site is located and indicate the percentage of the site in each district. *NOTE – Be sure to include overlay zoning districts.*

| Zoning District | Percentage |
|-------------------------------------|-------------------|
| Agricultural-Residential II (AR-II) | 100 |
| | |
| | |
| | |

9. Predominant soil type(s) on the site: Hinckley Sandy Loam & Windsor Loamy Sand**Soil Drainage***(Use the U.S. Soil Conservation Service's definition)*

| Soil Type | % of Site |
|-------------------------|------------------|
| Well drained | 100 |
| Moderately well drained | |
| Poorly drained | |

10. Are there any bedrock outcroppings on the site? ☐ Yes ☒ No

If yes, specify: _____

11. Approximate percentage of proposed site with slopes between:

| Slope | % of Site |
|------------------|------------------|
| 0 – 10% | 66 |
| 10 – 15% | 18 |
| Greater than 15% | 16 |

12. In which of the Groundwater Protection Districts is the site located?

Zone(s) 2

Proximity to a public well: 440' feet

13. Does the project site contain any species of plant or animal life that is identified as rare or endangered? (*Consult the Massachusetts Heritage Program and the Medway Conservation Commission for information.*) ☐ Yes ☒ No

If yes, specify: _____

14. Are there any unusual site features such as trees larger than 30 inches, bogs, kettle ponds, eskers, drumlins, quarries, distinctive rock formations or granite bridges?

☐ Yes ☒ No

If yes, specify: _____

15. Are there any established foot paths running through the site or railroad right of ways? ☐ Yes ☒ No

If yes, please specify: _____

16. Is the site presently used by the community as an open space or recreation area? ☐ Yes ☒ No

If yes, please specify: _____

17. Does the site include scenic views or will the proposed development cause any scenic vistas to be obstructed from view? ☐ Yes ☒ No

If yes, please specify: _____

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18. Are there wetlands, lakes, pond, streams or rivers within or contiguous to the site? ☐ Yes ☒ No

If yes, please specify: _____

19. Is there any farmland or forest land on the site protected under Chapter 61A or 61B of the Massachusetts General Laws? ☐ Yes ☒ No

If yes, please specify: _____

20. Has the site ever been used for the disposal of hazardous waste? Has a 21E study been conducted for the site? ☐ Yes ☒ No

If yes, please specify: _____

21. Will the proposed activity require use and/or storage of hazardous materials, or generation of hazardous waste? ☐ Yes ☒ No

If yes, please specify: _____

22. Does the project location contain any buildings or sites of historic or archaeological significance? (Consult with the Medway Historical Commission) ☐ Yes ☒ No

If yes, please describe: _____

23. Is the project contiguous to or does it contain a building located in a national register historic district? ☐ Yes ☒ No

If yes, please describe: _____

CIRCULATION

24. What is the expected average weekday traffic and peak hour volumes to be generated by the proposed subdivision?

| | |
|-------------------------------------|---------------------|
| Average weekday traffic | 10 Vehicle Trips |
| Average peak hour volumes – morning | 1.35 (Enter & Exit) |
| Average peak hour volumes - evening | 1.70 (Enter & Exit) |

25. Existing street(s) providing access to the proposed subdivision:

Please specify: Populatic Street

26. Existing intersection(s) within 1000 feet of any access to the proposed development. Please specify intersection names: Water St. & Populatic St., Populatic St.

& Walker St., Pearl St. & Walker St.

27. Location of existing sidewalks within 1000 feet of the proposed site: _____

No Existing Sidewalk within 1000' of Proposed Slte

28. Location of proposed sidewalks and their connection to existing sidewalks:
No Sidewalks are Proposed for the Slte

29. Are there parcels of undeveloped land adjacent to the proposed site:

X Yes No

Will access to these undeveloped parcels be provided from the proposed subdivision?

Yes X No

If yes, please describe: The Proposed Lot 2 is bounded on the South side
by an undeveloped parcel associated with a power line easement.

If no, please explain why: _____

UTILITIES AND MUNICIPAL SERVICES

30. What is the total number of dwelling units proposed? 2

31. What is the total number of bedrooms in the proposed subdivision? 7

32. Stormwater Management

A. Describe the nature, location and surface water body receiving current surface water of the site: Existing site has no surface stormwater outlet
and, subsequently, no reciving water of surface water body.

- B. Describe the how the proposed stormwater management system will operate and how the existing stormwater patterns will be altered: _____

The existing stormwater pattern shows the site low point acting as an infiltration basin for all portions of the site and some surrounding areas. The proposed stormwater pattern will mimic/retain this feature. Stormwater from the proposed road will be conveyed through roadside grass swales and maintain the infiltration/groundwater recharge that exists today. The proposed runoff will meet the quality as outlined in the 2008 Ma DEP Stormwater Policy.

- C. Will a NPDS Permit be required? _____ Yes _____ X No

33. Please estimate the response time of the Fire Department to this site:
(Please consult with the Fire Department): _____ < 4 min

34. Schools

- A. Projected number of new school age children: _____ 2

- B. Distance to nearest elementary school: _____ 5,000'

MEASURES TO MITIGATE IMPACTS - Please attach a brief description of the measures that haven been taken during subdivision design and will be taken during subdivision construction for each of the following:

- 35. Maximize stormwater infiltration and groundwater recharge
- 36. Prevent surface and groundwater contamination
- 37. Reduce detrimental impacts to water quality
- 38. Maintain slope stability and prevent erosion
- 39. Conserve energy
- 40. Preserve wetlands
- 41. Preserve wildlife habitats, outstanding ecological or botanical features
- 42. Protect scenic views
- 43. Retain natural landscape features
- 44. Design street layouts to facilitate southern orientation of houses
- 45. Use curvilinear street patterns
- 46. Promote pedestrian and bicycle access and safety
- 47. Reduce the number of mature trees to be removed
- 48. Provide green belt/buffer areas
- 49. Preserve historically important structures and features on the site
- 50. Retain natural valley flood storage areas
- 51. Minimize the extent of waterways altered or relocated
- 52. Reduce the volume of cut and fill
- 53. Minimize the visual prominence of man-made elements even if necessary for safety or orientation
- 54. Minimize municipal maintenance frequency and costs
- 55. Reduce building site frontages or driveway egresses onto primary or secondary streets

In describing each of the above, please use layman's terms where possible while still being accurate and comprehensive. Where appropriate, please use graphic illustrations. Identify data sources, reference materials and methodology used to determine all conclusions.

Measures to Mitigate Impacts

Form F -35-55

35. Maximize stormwater infiltration and groundwater recharge

The sandy nature of the on-site soils promotes the maximization of on-site infiltration. The site has no current discharge of stormwater run-off; all runoff is retained on site and infiltrated at the site low point. By retaining this infiltration area, and allowing no off-site stormwater discharge, stormwater infiltration and, sub sequentially, groundwater recharge will be maximized.

(See Attachment A)

36. Prevent surface and groundwater contamination

There is no discharge to surface waters proposed as part of this project. The project will be designed to meet the water quality requirements of the DEP 2008 Stormwater Policy. Stormwater runoff will be routed through a Best Management Practice (BMP) "treatment train" of Grass swales, check dams and infiltration.

37. Reduce detrimental impacts to water quality

The project will be designed to meet the water quality requirements of the DEP 2008 Stormwater Policy. Stormwater runoff will be routed through a Best Management Practice (BMP) "treatment train" of Grass swales, check dams and infiltration.

38. Maintain slope stability and prevent erosion

Erosion Control barrier will be installed at the toe of slope, adjacent to the on-site infiltration area to ensure infiltration integrity during construction. All disturbed areas will be seeded to prevent erosion and maintain long term stability.

39. Conserve energy

The proposed home associated with Lot 2 will be constructed under both the most current, 8th Edition, of the IBC Building Code, and the Board of Building Regulations and Standards (BBRS) Stretch Code as required by the Medway Building Department. The implementation of both codes will ensure the highest level of energy conservation.

40. Preserve wetlands

The National Wetland Inventory and Ma Department of Environmental Protection (DEP) mapping shows no wetland resource areas/Buffer zones within the project area. On Site review of the Parcel reveals there confirms are no wetland resource areas, no wetland Indicator plants and no hydric soils (project Low Point).

(See Attachment B)

41. Preserve wildlife habitats, outstanding ecological or botanical features

To ensure minimize land disturbance, and subsequent protection of habitats and ecological features, the proposed subdivision utilizes a reduced width roadway, designed to be the minimum design width (18') allowed under Medway Regulations, that is designed to follow the existing site topography and by maximizing the land allotted to the one (1) new lot proposed lot. Under the zoning dimensional regulations for this area (AR-II), 22,500 s.f. lot sizes are allowed; by providing only one (1) new 1.7 Acres (71,880 s.f.) lot, the land disturbances and development density are minimized.

This combination of minimized roadway width and large single-family lot area provides for minimal impacts to the existing land/habitat and, furthermore, the development will prevent the use of the area for any future, more dense, development that would necessitate more land disturbance.

42. Protect scenic views

By combining a low density, one-lot development with a minimal width roadway designed to match the existing land topography, all existing scenic views will be maintained.

43. Retain natural landscape features

The proposed subdivision utilizes a reduced width roadway, designed to be the minimum design width (18') allowed under Medway Regulations, that is designed to follow the existing site topography and by maximizing the land allotted to the one (1) new lot proposed lot. Under the zoning dimensional regulations for this area (AR-II), 22,500 s.f. lot sizes are allowed; by providing only one (1) new 1.7 Acres (71,880 s.f.) lot, the land disturbances and development density are minimized.

This combination of minimized roadway width and large single-family lot area provides for minimal impacts to the existing land/habitat and, furthermore, the development will prevent the use of the area for any future, more dense, development that would necessitate more land disturbance.

44. Design street layouts to facilitate southern orientation of houses

The proposed limited (260') street length provides for a large usable lot size (1.7 Acres) which, in turn, allows for the proposed home to be situated with a southern orientation.

45. Use curvilinear street patterns

The proposed roadway has a curvilinear design.

46. Promote pedestrian and bicycle access and safety

Pedestrian and bicycle access will be minimal due to only one (1) new lot being located on the proposed roadway and the roadway being a dead end private road. The roadway does meet the design requirements of Section 5.2.5 of the Mass DOT Design manual for Shared Accommodation roadways where *"the traffic volumes and vehicle speeds will be low enough, now and in the future, so that all pedestrians can comfortably use the street"*.

The roadway width (18') can safely allow the passage of vehicles and pedestrians based on the anticipated traffic volume of 10 weekday trips (per ITE Trip Generation Manual) for the one (1) residential lot.

47. Reduce the number of mature trees to be removed

By utilizing the narrowest allowable roadway (18') with no sidewalks, incorporating an existing roadside swale, and associated on site infiltrating "valley" drainage area, along with utilizing a "Hammerhead" turn around as opposed to a paved cul-de-sac, mature tree removal will be kept to a minimum.

48. Provide green belt/buffer areas

Unutilized areas within the proposed Right-of-Way will be left in a natural state; street trees will be added to provide additional greenery to areas between street line and residential lots. The proposed lot size far exceeds the minimum allowed lot size and will result in retaining a significant portion of on lot trees between abutting lots.

49. Preserve historically important structures and features on the site

N/A.

No historic structures or features located on site.

50. Retain natural valley flood storage areas

The current owners of the property have mentioned the site was used for gravel mining previous to its transformation to residential in 1961. The National Resource and Conservation Service (NRCS) mapping confirms the presence to "Excessively Drained" Windsor and Hinckley type soils. The site contains a "valley" type feature located to the rear of the existing house and adjacent to the proposed roadway. This "valley" low point serves as an infiltration area and will be retained and utilized under the proposed design.

51. Minimize the extent of waterways altered or relocated

N/A.

No waterways exist on site.

52. Reduce the volume of cut and fill

The proposed roadway is designed to mirror the existing on site slopes to ensure a natural integration into the landscape and minimization of cut and fills.

53. Minimize the visual prominence of man-made elements even if necessary for safety or orientation

Man-made elements will be limited to horizontal roadway features such as Bituminous Concrete roadway, water gate valves and electric handholes. These elements do not present a visual prominence. There will be no man-made vertical (prominent) visual elements beyond the street sign.

54. Minimize municipal maintenance frequency and costs

The roadway is proposed to be a Permanent Private Way. All Maintenance costs will be the responsibility of the owner of Lot 2.

55. Reduce building site frontages or driveway egresses onto primary or secondary streets

Though the project will not reduce the number of driveway openings onto Populatic St., the project proposes only one (1) new egress. St. The length of Populatic St from Walker St to the Franklin Town Line is approximately 1700'. Along that length there are only 13 existing driveway opening on to the roadway. The addition of one (1) additional opening onto Populatic St., which will service only one home, will not change the low density driveway egress character of this roadway.

Attachment A
Soils Data

Hydrologic Soil Group—Norfolk and Suffolk Counties, Massachusetts
(22 Populatic St)



Hydrologic Soil Group

| Hydrologic Soil Group— Summary by Map Unit — Norfolk and Suffolk Counties, Massachusetts (MA616) | | | | |
|--|---|--------|--------------|----------------|
| Map unit symbol | Map unit name | Rating | Acres in AOI | Percent of AOI |
| 245C | Hinckley loamy sand, 8 to 15 percent slopes | A | 1.7 | 61.9% |
| 255B | Windsor loamy sand, 3 to 8 percent slopes | A | 1.1 | 38.1% |
| Totals for Area of Interest | | | 2.8 | 100.0% |

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

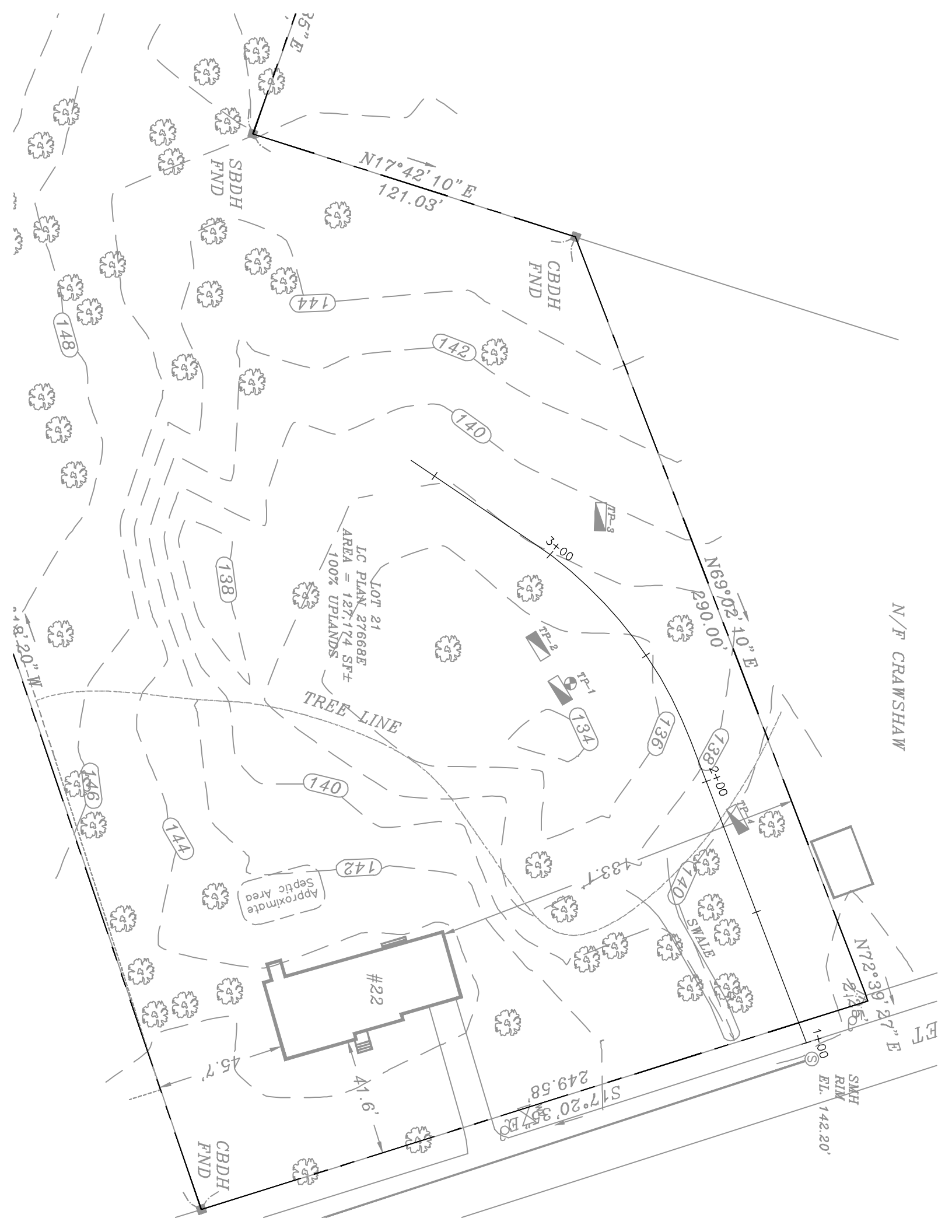
Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.





Commonwealth of Massachusetts
City/Town of

Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

A. Facility Information

Owner Name
WASNEWSKI

Street Address
22 POPULAT ST

City
MEDWAY

State
MA

Map/Lot #
02053

Zip Code

B. Site Information

1. (Check one) ☒ New Construction ☐ Upgrade ☐ Repair

2. Soil Survey Available? ☐ Yes ☐ No

If yes:

Soil Name
HINCKLEY SAND LOAM / WOODBR LOAMY SAND

Source
RAPID PERC

Soil Limitations

DRUMUN

Geologic/Parent Material

Landform

3. Surficial Geological Report Available? ☒ Yes ☐ No

If yes:

Year Published/Source

Publication Scale

Map Unit

4. Flood Rate Insurance Map

Above the 500-year flood boundary? ☒ Yes ☐ No

If Yes, continue to #5.

5. Within a velocity zone? ☐ Yes ☒ No

6. Within a Mapped Wetland Area? ☐ Yes ☒ No

7. Current Water Resource Conditions (USGS):

Month/Year

8. Other references reviewed:

MassGIS Wetland Data Layer:

Wetland Type

Range: ☐ Above Normal ☒ Normal ☐ Below Normal

Within the 100-year flood boundary? ☐ Yes ☒ No



Commonwealth of Massachusetts
City/Town of

Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

C. On-Site Review (minimum of two holes required at every proposed primary and reserve disposal area)

Deep Observation Hole Number: 1 Date: 6/19/17 Time: 8:30 AM Weather: Clear 80°

1. Location
Ground Elevation at Surface of Hole: 134.5' Latitude/Longitude: /

Description of Location: SITE LOW POINT - PROPOSED INFILTRATION

2. Land Use: WOODLAND Surface Stones (e.g., cobbles, stones, boulders, etc.): NONE Slope (%): 2

(e.g., woodland, agricultural field, vacant lot, etc.)
Vegetation: DRUMCUN Position on Landscape (SU, SH, BS, FS, TS): Wetlands

Distances from: Open Water Body: 80' ± feet
Drainage Way: 500' ± feet

Property Line: 80' ± feet
Drinking Water Well: Other feet

Parent Material: OUTWASH Unsuitable Materials Present: ☐ Yes ☒ No

If Yes: ☐ Disturbed Soil ☐ Fill Material ☐ Impervious Layer(s) ☐ Weathered/Fractured Rock ☐ Bedrock

Groundwater Observed: ☐ Yes ☒ No If yes: 12.9' Depth Weeping from Pit

Estimated Depth to High Groundwater: 31" inches elevation 12.9' Depth Standing Water in Hole



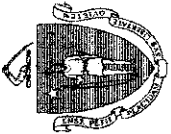
Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

C. On-Site Review (continued)

Deep Observation Hole Number: 1

| Depth (In.) | Soil Horizon/ Layer | Soil Matrix: Color- Moist (Munsell) | Redoximorphic Features | | | Soil Texture (USDA) | Coarse Fragments % by Volume | | Soil Structure | Soil Consistence (Moist) | Other |
|-------------|------------------------|--|------------------------|----------|---------|------------------------|---------------------------------|---------------------|----------------|--------------------------------|-------|
| | | | Depth | Color | Percent | | Gravel | Cobbles & Stones | | | |
| 0-11 | Ap | 10YR 2/2 | | | | LOAMY SAND | | | GRANULAR | | |
| 11-17 | Bw | 10YR 6/2 | | | | SAND | | | MASSIVE | FRAGILE | |
| 17-78 | C | 2.5Y 8/2 | 31 | 2.5Y 6/6 | 6 | FINE SAND | | | MASSIVE | LOOSE | |
| | | | | | | | | | | | |
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Additional Notes:



Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

C. On-Site Review (minimum of two holes required at every proposed primary and reserve disposal area)

Deep Observation Hole Number: 2 Date: 6/19/17 Time: 8:50 AM Weather: CLEAR

1. Location
Ground Elevation at Surface of Hole: 1350 ± feet Latitude/Longitude: /

Description of Location: SITE LOW POINT - PROPOSED INFILTRATION

2. Land Use WOODLAND
(e.g., woodland, agricultural field, vacant lot, etc.)

Surface Stones (e.g., cobbles, stones, boulders, etc.) NONE

Landform DRAINAGE

Position on Landscape (SU, SH, BS, FS, TS) TS

Wetlands 500 ± feet

Other feet

feet

feet

Drinking Water Well

feet

feet

Property Line

Open Water Body

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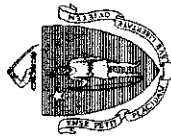
Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

C. On-Site Review (continued)

Deep Observation Hole Number: 2

| Depth (In.) | Soil Horizon/ Layer | Soil Matrix: Color- Moist (Munsell) | Redoximorphic Features | | | Soil Texture (USDA) | Coarse Fragments % by Volume | | | Soil Structure | Soil Consistence (Moist) | Other |
|-------------|------------------------|--|------------------------|-------|---------|------------------------|---------------------------------|---------------------|--|----------------|--------------------------------|-------|
| | | | Depth | Color | Percent | | Gravel | Cobbles & Stones | | | | |
| 0-10 | Ap | 10YR 2/2 | | | | LOAMY SAND | | | | GRANULAR | | |
| 10-16 | Bw | | | | | SAND | | | | MASSIVE | FRAYE | |
| 16-79 | C | 2.5Y 8/2 | 36 | | 6 | FINE SAND | | | | MASSIVE | LOOSE | |
| | | | | | | | | | | | | |
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Additional Notes:



Commonwealth of Massachusetts
City/Town of

Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

C. On-Site Review (minimum of two holes required at every proposed primary and reserve disposal area)

Deep Observation Hole Number: 3 Date: 6/19/17 Time: 9:00 AM Weather: CLEAR 80°

1. Location

Ground Elevation at Surface of Hole: 139.5' feet Latitude/Longitude: 1

Description of Location: PROPOSED ROAD

2. Land Use

WOODLAND
(e.g., woodland, agricultural field, vacant lot, etc.)

NONE

Surface Stones (e.g., cobbles, stones, boulders, etc.)

5

Slope (%)

Vegetation

DRUMLIN
Landform

Position on Landscape (SU, SH, BS, FS, TS)

500' ±

feet

3. Distances from:

Open Water Body

25

feet

Drainage Way

Wetlands

feet

Other

feet

Property Line

25

feet

Drinking Water Well

Other

feet

feet

4. Parent Material:

OUTWASH

Unsuitable Materials Present: ☐ Yes ☒ No

If Yes:

☐ Disturbed Soil

☐ Fill Material

☐ Impervious Layer(s)

☐ Weathered/Fractured Rock

☐ Bedrock

Groundwater Observed: ☐ Yes ☒ No

If yes:

Depth Weeping from Pit

Depth Standing Water in Hole

Estimated Depth to High Groundwater: 67

inches

133.9

elevation



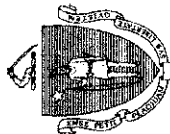
Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

C. On-Site Review (continued)

Deep Observation Hole Number: 3

| Depth (in.) | Soil Horizon/ Layer | Soil Matrix: Color- Moist (Munsell) | Redoximorphic Features | | | Soil Texture (USDA) | Coarse Fragments % by Volume | | Soil Structure | Soil Consistence (Moist) | Other |
|-------------|------------------------|--|------------------------|----------|---------|------------------------|---------------------------------|---------------------|----------------|--------------------------------|-------|
| | | | Depth | Color | Percent | | Gravel | Cobbles & Stones | | | |
| 0-15 | Ap | 10YR 3/4 | | | | SANDY LOAM | | | GRANULAR | FRAGILE | |
| 15-43 | Bw | 2.5Y 6/4 | | | | LOAMY SAND | | | MASSIVE | LOOSE | |
| 43-77 | C | 2.5Y 6/2 | 67 | 10YR 5/8 | 10 | MED SAND | 15 | 5 | MASSIVE | LOOSE | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

Additional Notes:



Commonwealth of Massachusetts
City/Town of

Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

C. On-Site Review (continued)

Deep Observation Hole Number: 4 Date: 6/19/17 Time: 9:30 AM Weather: Clear-80°

1. Location

Ground Elevation at Surface of Hole: 140.0' Latitude/Longitude: /

2. Land Use LAWN Surface Stones (e.g., cobbles, stones, boulders, etc.) NONE Slope (%) 4
(e.g., woodland, agricultural field, vacant lot, etc.)

3. Distances from: Vegetation Landform
Open Water Body Drainage Way Position on Landscape (SU, SH, BS, FS, Wetlands 450± feet
Property Line 30 feet Drinking Water Well Other feet
feet feet

4. Parent Material: OUTWASH Unsuitable Materials Present: ☐ Yes ☒ No

If Yes: ☐ Disturbed Soil ☐ Fill Material ☐ Impervious Layer(s) ☐ Weathered/Fractured Rock ☐ Bedrock

5. Groundwater Observed: ☐ Yes ☒ No If yes: Depth Weeping from Pit <133.5' Depth Standing Water in Hole

Estimated Depth to High Groundwater: > 78" inches elevation



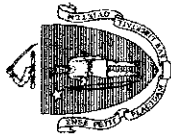
Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

C. On-Site Review (continued)

Deep Observation Hole Number: 4

| Depth (in.) | Soil Horizon/ Layer | Soil Matrix: Color- Moist (Munsell) | Redoximorphic Features | | | Soil Texture (USDA) | Coarse Fragments % by Volume | | Soil Structure | Soil Consistence (Moist) | Other |
|-------------|------------------------|--|------------------------|-------|---------|------------------------|---------------------------------|---------------------|----------------|--------------------------------|-------|
| | | | Depth | Color | Percent | | Gravel | Cobbles & Stones | | | |
| 0-18 | Ap | 10 YR 3/4 | | | | SANDY LOAM | | | | | |
| 18-42 | Bw | 2.5 Y 4/2 | | | | LOAMY SAND | 15 | 10 | GRANULAR | LOOSE | |
| 42-78 | C | 10 YR 5/3 | | | | MED SAND | 20 | 15 | GRANULAR | LOOSE | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| | | | | | | | | | | | |

Additional Notes:



Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

D. Determination of High Groundwater Elevation

1. Method Used:

- ☐ Depth observed standing water in observation hole
- ☐ Depth weeping from side of observation hole
- ☒ Depth to soil redoximorphic features (mottles)
- ☐ Depth to adjusted seasonal high groundwater (S_h) (USGS methodology)

| Obs. Hole # | Obs. Hole # |
|-------------|-------------|
| 1 | 2 |
| inches | inches |
| 31 | 36 |
| inches | inches |
| 131.9' | 132.0' |
| inches | inches |

Index Well Number

Reading Date

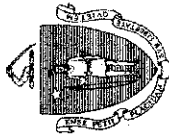
$$S_h = S_c - [S_r \times (OW_c - OW_{max}) / OW_r]$$

| Obs. Hole # | S_c | S_r | OW_c | OW_{max} | OW_r | S_h |
|-------------|-------|-------|--------|------------|--------|-------|
| Obs. Hole # | S_c | S_r | OW_c | OW_{max} | OW_r | S_h |

E. Depth of Pervious Material

1. Depth of Naturally Occurring Pervious Material

- a. Does at least four feet of naturally occurring pervious material exist in all areas observed throughout the area proposed for the soil absorption system?
- ☐ Yes ☐ No
- b. If yes, at what depth was it observed?
- Upper boundary: inches Lower boundary: inches
- c. If no, at what depth was impervious material observed?
- Upper boundary: inches Lower boundary: inches



Commonwealth of Massachusetts
City/Town of

Form 11 - Soil Suitability Assessment for On-Site Sewage Disposal

F. Board of Health Witness

Name of Board of Health Witness

Board of Health

G. Soil Evaluator Certification

I certify that I am currently approved by the Department of Environmental Protection pursuant to 310 CMR 15.017 to conduct soil evaluations and that the above analysis has been performed by me consistent with the required training, expertise and experience described in 310 CMR 15.017. I further certify that the results of my soil evaluation, as indicated in the attached Soil Evaluation Form, are accurate and in accordance with 310 CMR 15.100 through 15.107.

Signature of Soil Evaluator

JEFFREY KANE #13275

Typed or Printed Name of Soil Evaluator / License #

Date

6/19/17

Expiration Date of License

6/30/19

Note: In accordance with 310 CMR 15.018(2) this form must be submitted to the approving authority within 60 days of the date of field testing, and to the designer and the property owner with Percolation Test Form 12.



Commonwealth of Massachusetts
City/Town of
Percolation Test
Form 12

Percolation test results must be submitted with the Soil Suitability Assessment for On-site Sewage Disposal. DEP has provided this form for use by local Boards of Health. Other forms may be used, but the information must be substantially the same as that provided here. Before using this form, check with the local Board of Health to determine the form they use.

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



A. Site Information

Owner Name WASLEWSKI
Street Address or Lot # 22 POPULATIC ST
City/Town MEDWAY State MA Zip Code 02053
Contact Person (if different from Owner) _____ Telephone Number _____

B. Test Results

| | Date <u>6/19/17</u> | Time | Date <u>6/19/17</u> | Time |
|--------------------|-------------------------------------|------|-------------------------------------|------|
| Observation Hole # | <u>1</u> | | <u>2</u> | |
| Depth of Perc | <u>18"</u> | | <u>19"</u> | |
| Start Pre-Soak | <u>9:50 AM</u> | | <u>10:15 AM</u> | |
| End Pre-Soak | <u>10:05 AM</u> | | <u>10:30 AM</u> | |
| Time at 12" | <u>*</u> | | <u>*</u> | |
| Time at 9" | | | | |
| Time at 6" | | | | |
| Time (9"-6") | | | | |
| Rate (Min./Inch) | <u>< 2 min/in</u> | | <u>< 2 min/in</u> | |
| Test Passed: | <input checked="" type="checkbox"/> | | <input checked="" type="checkbox"/> | |
| Test Failed: | <input type="checkbox"/> | | <input type="checkbox"/> | |

Test Performed By: JEFF KANE SE#13275

Board of Health Witness _____

Comments:

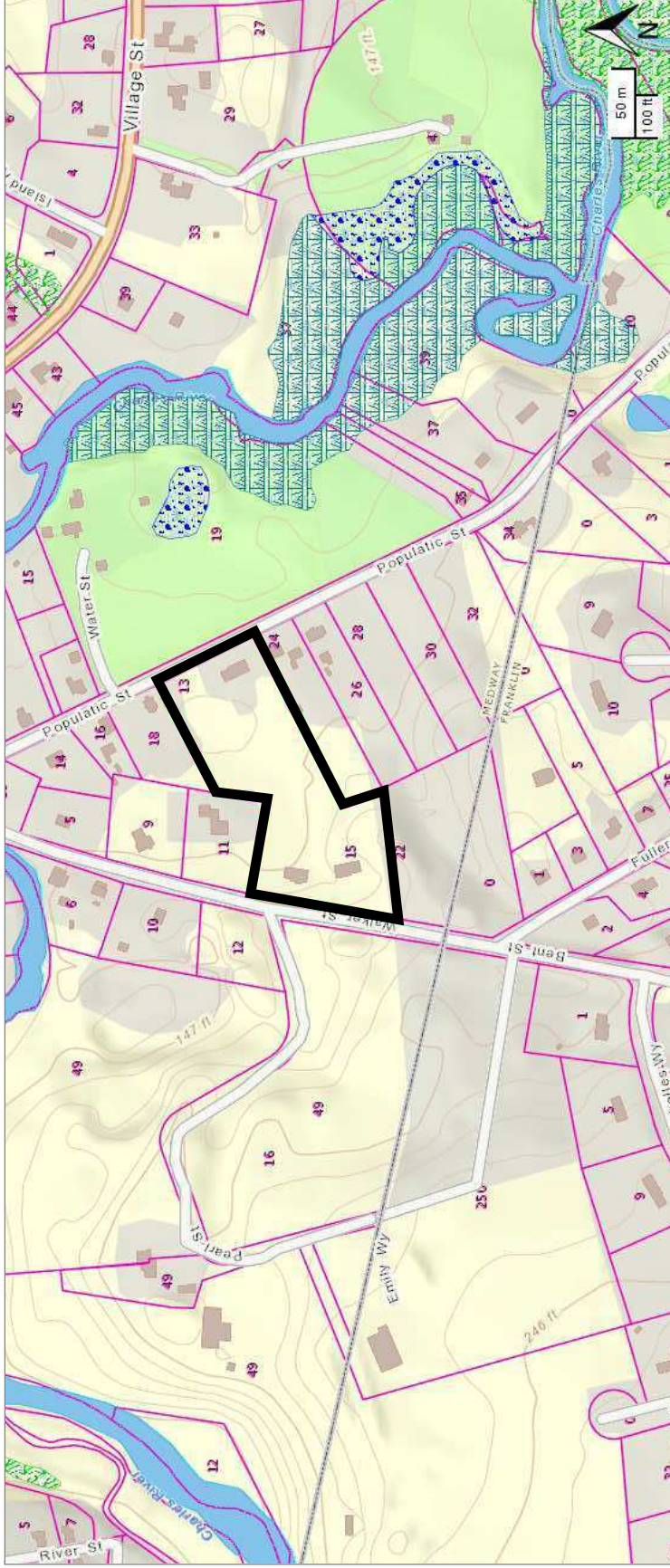
* > 24 GAL ADDED W/I.N 15 MIN

Attachment B
Wetland Data

National Wetland Inventory Wetlands



DEP Wetlands



- DEP Wetlands Detailed With Outlines
- Barrier Beach System
- Barrier Beach-Deep Marsh
- Barrier Beach-Wooded Swamp Mixed
- Barrier Beach-Coastal Beach
- Barrier Beach-Coastal Dune
- Barrier Beach-Marsh
- Barrier Beach-Salt Marsh
- Barrier Beach-Shrub Swamp
- Barrier Beach-Wooded Swamp Conifer
- Barrier Beach-Wooded Swamp Decid
- Bog
- Coastal Bank Bluff or Sea Cliff
- Coastal Beach
- Coastal Dune
- Cranberry Bog
- Deep Marsh
- Barrier Beach-Open Water
- Open Water
- Rocky Intertidal Shore
- Salt Marsh
- Shallow Marsh Meadow or Fen
- Shrub Swamp
- Tidal Flat
- Wooded Swamp Coniferous
- Wooded Swamp Deciduous
- Wooded Swamp Mixed Trees
- Tax Parcels for Query

Detailed Features

Tax Parcels

Structures

MassGIS Statewide Basemap
MassGIS Topographic Features Basemap