

NOTES:
 1. ALL PIPE FROM FOUNDATION TO SOIL ABSORPTION SYSTEM TO BE WATERTIGHT SCH 40 4" PVC LAID ON FIRM BASE.
 2. HYDRAULIC CEMENT IS REQUIRED TO SEAL ALL CONNECTIONS AT THE SEPTIC TANK AND D-BOX WHERE PRECAST WATERTIGHT CONNECTIONS ARE NOT PROVIDED. ALL PENETRATIONS THROUGH SEPTIC TANK AND D-BOX SHALL BE TESTED FOR LEAKS.

GROUNDWATER SEPARATION
 EXISTING GRADE: 102.00
 DEPTH TO GW: 2'
 ESHGW: 100.00
 REQ'D SEPARATION: 3.0' (WITH LOCAL UPGRADE APPROVAL)
 BED BOTTOM (MIN): 103.00

LOCAL UPGRADE APPROVAL REQUESTS:
 SAS OFFSET TO SEASONAL HIGH GROUNDWATER: 3'

TEST PIT DATA

SOIL EVALUATOR: MARK FARRELL
 WITNESSED BY: TOM PURCELL, BOH
 5-12-20

| TEST PIT 1 | | TEST PIT 2 | |
|------------|--------------------|------------|--------------------|
| 0'-8" | A SL 10 YR 3/2 | 0'-8" | A SL 10 YR 3/2 |
| 8'-30" | Bw SL 10 YR 6/8 | 8'-30" | Bw SL 10 YR 6/8 |
| 30'-72" | C LS 2.5 YR 6/4 | 30'-72" | C LS 2.5 YR 6/4 |

GROUND WATER ELEV (OBSERVED): NONE
 MOTTLING ELEV (OBSERVED): 24"
 DEPTH TO REFUSAL: N/A

PERCOLATION TEST DATA

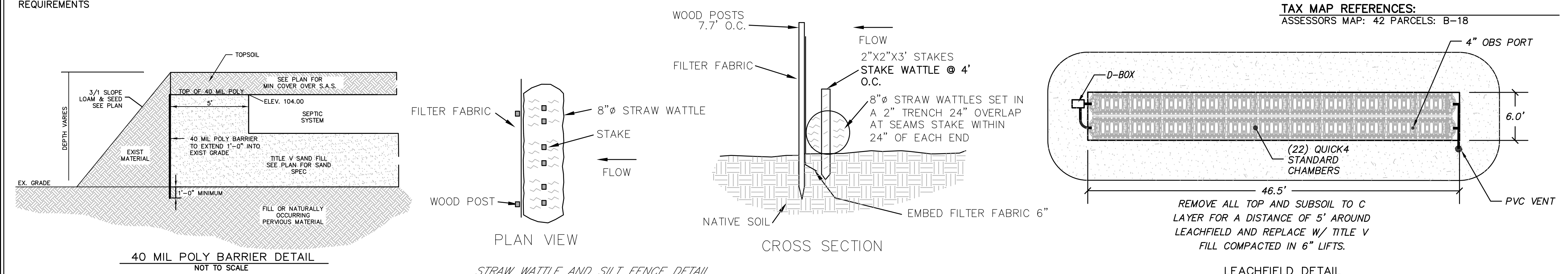
SOIL EVALUATOR: MARK FARRELL
 WITNESSED BY: TOM PURCELL, BOH
 5-12-20

PERC P-1

FIELD RATE: 8 MPI
 DESIGN RATE: 10 MPI
 SOIL CLASSIFICATION: CLASS I

SETBACKS

ZONE: GENERAL RESIDENTIAL
 AREA: 10,000 S.F.
 FRONTAGE: 100'
 FRONT YARD: 20'
 SIDE YARD: 10'
 REAR YARD: 15'



DESIGN CRITERIA

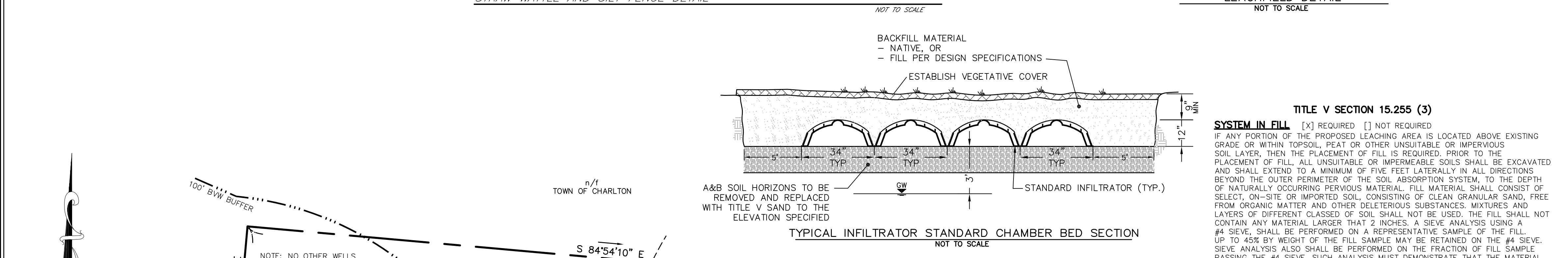
TYPE OF ESTABLISHMENT: EXISTING (3) BEDROOM SINGLE FAMILY DWELLING

SEPTIC TANK CAPACITY: 1,500 GAL
 DESIGN FLOW: 3 BEDROOMS x 110 GPD = 330 GPD (330 GPD MIN)
 LEACHING CAPACITY REQUIRED: (330 GPD) / (0.60 GPD/SF) = 550 SF
 LEACHING AREA CALCULATIONS: (22) QUICK 4 STANDARD CHAMBERS IN (2) 11 CHAMBER ROW BED
 HYDRAULIC CAPACITY PROVIDED: 22 X 4' X 4.72 S.F./L.F. = 415 S.F. ±
 EFFECTIVE LEACHING CAPACITY: 415 S.F./550 S.F. = 75%
 25% REDUCTION IN LEACH AREA*

*PER MA DEP STANDARD CONDITIONS FOR ALTERNATIVE SOIL ABSORPTION SYSTEMS WITH GENERAL USE CERTIFICATION AND/OR APPROVED REMEDIAL USE, SECTION II.9.g, UP TO 40% REDUCTION ALLOWED FOR INFILTRATORS

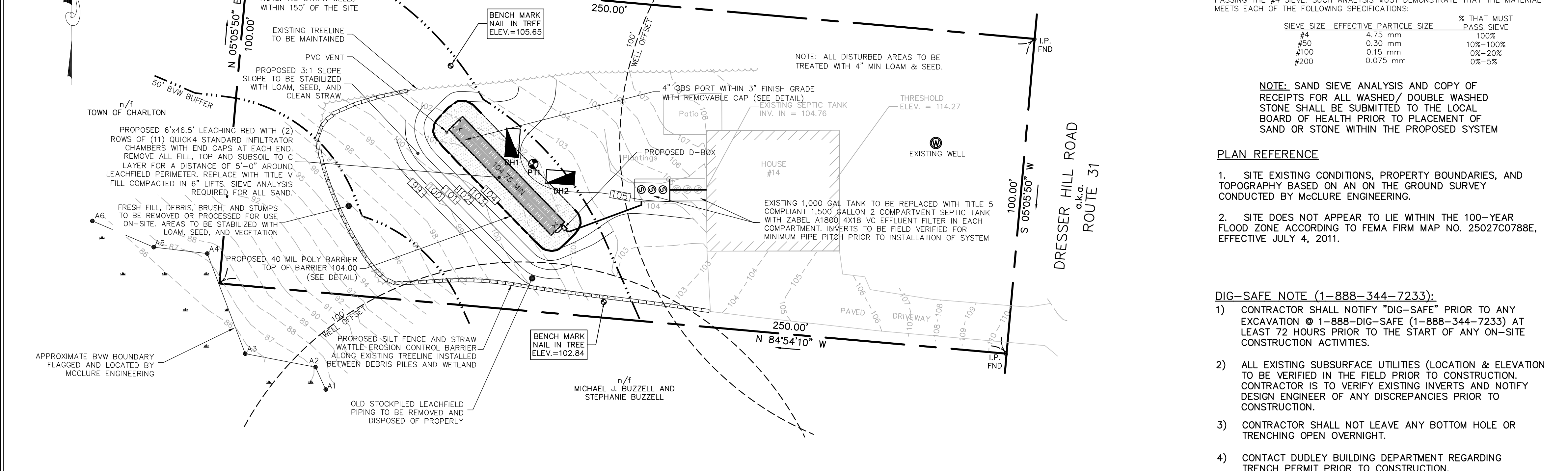
NITROGEN LOADING

LOT SIZE: 0.57± ACRES
 MAXIMUM FLOW ALLOWANCE: 440 GPD X 0.57 ACRES = 250 GPD
 PROPOSED FLOW: 440 GPD > 250 GPD
 PROPOSED SUBSURFACE DISPOSAL SYSTEM IS FOR THE REPAIR OF AN EXISTING SYSTEM IN FAILURE, LOT DOES NOT REQUIRE NITROGEN SENSITIVE DESIGN



GENERAL NOTES

- THIS PLAN IS TO BE UTILIZED ONLY FOR THE CONSTRUCTION OF THE SUBSURFACE INFILTRATION SYSTEM ILLUSTRATED HEREON.
- ALL CHANGES TO THIS PLAN MUST BE APPROVED BY THE TOWN OF CHARLTON.
- ALL SITE WORK AND MATERIALS SHALL BE IN COMPLIANCE WITH TITLE 5 OF THE STATE ENVIRONMENTAL CODE AND THE TOWN OF CHARLTON BOARD OF HEALTH RULES AND REGULATIONS.
- ANY CONDITIONS DURING CONSTRUCTION THAT DIFFER FROM THOSE ENCOUNTERED DURING TESTING SHALL BE REPORTED TO THE ENGINEER OF RECORD AND THE LOCAL BOARD OF HEALTH IMMEDIATELY.
- FOR SYSTEMS CONSTRUCTED IN FILL ALL UNSUITABLE OR IMPERMEABLE SOILS, IF ANY, MUST BE EXCAVATED AND REMOVED A MINIMUM OF FIVE FEET LATERALLY IN ALL DIRECTIONS BEYOND THE OUTER PERIMETER OF THE SOIL ABSORPTION SYSTEM TO THE DEPTH OF NATURALLY OCCURRING PERVIOUS MATERIAL AS REQUIRED BY 310 CMR 15.240 AND REPLACED WITH FILL MATERIAL CONSISTING OF SELECT ON-SITE OR IMPORTED SOIL MATERIAL. THE FILL SHALL BE COMPRISED OF CLEAN GRANULAR SAND, BE FREE FROM ORGANIC MATTER AND DELETERIOUS SUBSTANCES, AND SHALL NOT CONTAIN REMEDIATION WASTE AS THAT TERM IS DEFINED IN 310 CMR 40.0000. MIXTURES AND LAYERS OF DIFFERENT CLASSES OF SOIL SHALL NOT BE USED. THE FILL SHALL NOT CONTAIN ANY MATERIAL LARGER THAN TWO INCHES. A SIEVE ANALYSIS, USING #4 SIEVE, SHALL BE PERFORMED ON A REPRESENTATIVE SAMPLE OF THE FILL. SUCH ANALYSIS MUST DEMONSTRATE THAT THE MATERIAL MEETS THE SPECIFICATIONS AS SET FORTH IN 310 CMR 15.255(3).
- PROPERTY LINES SHOWN ON THIS PLAN BASED ON DEED OF RECORD.
- OFFSETS ARE TO BE USED FOR THE REPRODUCTION OF PROPERTY LINES.
- ALL VERTICAL ELEVATIONS BASED ON NAD 1988.
- NO GARBAGE DISPOSAL ALLOWED.
- ALL STRUCTURES AND TOP OF LEACHING LINES TO BE LINED WITH MAGNETIC TAPE FOR FUTURE LOCATION.
- HEAVY MACHINERY SHALL NOT BE PERMITTED TO PASS OVER THE LEACHING AREA.
- ALL CHANGES IN DIRECTION, INTERSECTIONS AND AT NO GREATER INTERVAL OF 100' OF SEPTIC PIPE SHALL BE FITTED WITH A CLEANOUT. CLEANOUT SHALL BE BROUGHT TO SURFACE.
- THE SEPTIC TANK SHALL BE INSPECTED AND PUMPED EVERY TWO YEARS.
- ALL EXISTING OR PROPOSED WELLS ARE SHOWN OR NOTED.
- THE PROPOSED WORK IS SUBJECT TO THE WETLANDS PROTECTION ACT.
- THE PROPOSED CONSTRUCTION DOES NOT FALL WITHIN A FLOOD HAZARD ZONE.
- BENCHMARKS MUST BE SET PRIOR TO COMMENCEMENT OF ANY WORK.
- INSPECTIONS REQUIRED FOR AS-BUILT CERTIFICATION:
 - BOTTOM INSPECTION PRIOR TO THE INSTALLATION OF PERC SAND, 72 HOUR NOTICE REQ'D.
 - ALL COMPONENTS OF SEPTIC SYSTEM SHALL BE COMPLETE AND VISIBLE PRIOR TO REQUESTING A FINAL INSPECTION, 72 HOUR NOTICE REQUIRED.
 - FINAL COVER AND STABILIZATION INSPECT.
- THE INSTALLER SHALL LEAVE VERTICAL 4" PIPES AT THE END OF THE SYSTEM TO ALLOW FOR THE MEASUREMENT OF THE DEPTH OF STONE DURING INSPECTION.
- ALL SLOPING AND DISTURBED AREAS TO BE LOAMED, SEEDED, FERTILIZED AND MULCHED. STABILIZATION OF DISTURBED AREAS SHALL BE CHECKED THROUGHOUT CONSTRUCTION PHASE UNTIL VEGETATION IS ESTABLISHED AND REPAIRED AS NEEDED.
- ALL SOIL ABSORPTION SYSTEMS SHALL HAVE A MINIMUM OF ONE (1) INSPECTION PORT CONSISTING OF A FOUR (4) INCH PIPE PLACED VERTICALLY DOWN INTO THE STONE TO THE NATURALLY OCCURRING SOIL OR SAND FILL BELOW THE STONE. THE PIPE SHALL BE CAPPED WITH A SCREW TYPE CAP AND ACCESSIBLE TO WITHIN THREE (3) INCHES OF FINISH GRADE.



PLAN REFERENCE

- SITE EXISTING CONDITIONS, PROPERTY BOUNDARIES, AND TOPOGRAPHY BASED ON AN ON THE GROUND SURVEY CONDUCTED BY MCCLURE ENGINEERING.
- SITE DOES NOT APPEAR TO LIE WITHIN THE 100-YEAR FLOOD ZONE ACCORDING TO FEMA FIRM MAP NO. 25027C0788E, EFFECTIVE JULY 4, 2011.

DIG-SAFE NOTE (1-888-344-7233):

- CONTRACTOR SHALL NOTIFY "DIG-SAFE" PRIOR TO ANY EXCAVATION @ 1-888-DIG-SAFE (1-888-344-7233) AT LEAST 72 HOURS PRIOR TO THE START OF ANY ON-SITE CONSTRUCTION ACTIVITIES.
- ALL EXISTING SUBSURFACE UTILITIES (LOCATION & ELEVATION) TO BE VERIFIED IN THE FIELD PRIOR TO CONSTRUCTION. CONTRACTOR IS TO VERIFY EXISTING INVERTS AND NOTIFY DESIGN ENGINEER OF ANY DISCREPANCIES PRIOR TO CONSTRUCTION.
- CONTRACTOR SHALL NOT LEAVE ANY BOTTOM HOLE OR TRENCHING OPEN OVERNIGHT.
- CONTACT DUDLEY BUILDING DEPARTMENT REGARDING TRENCH PERMIT PRIOR TO CONSTRUCTION.

LEGEND

| | | | |
|------|-------------------|-------|--------------------|
| □ | SEPTIC TANK | — D — | DRAIN LINE |
| □ | DISTRIBUTION BOX | ⊙ | MANHOLE |
| --- | EXISTING CONTOURS | ⊙ | BENCHMARK |
| --- | PROPOSED CONTOURS | ⊙ | TEST PIT LOCATION |
| 1000 | SPOOT GRADE | ⊙ | PERC TEST LOCATION |
| W | WATER LINE | ⊙ | PRIVATE WELL |

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REPAIR (BOH 2020-34)
 LOCATED AT
 14 DRESSER HILL ROAD
 CHARLTON, MA 01507
 PREPARED FOR
 RUSSELL GOSSELIN

SEPTIC SYSTEM DESIGN PLAN

SHEET 1 OF 1