SITE PLAN
103 MARSHALL STREET
PREPARED FOR
JASON SOUTHWICK
JANUARY 2019

LOCUS MAP
1" = 200'

OWNER OF RECORD:
JASON J. SOUTHWICK
103 MARSHALL STREET
LEICESTER, MA
DEED BK. 51300 PG. 383

ZONING SUMMARY TABLE

ZONING DISTRICT – SUBURBAN AGRICULTURE

REQUIRED		PROVIDED
MIN. LOT AREA	80,000 S.F.	7.57± ACRES
MIN. FRONTAGE	200 FT.	131.5 FT.
MIN. FRONT YARD	40 FT.	583.4 FT.
MIN. SIDE YARD	40 FT.	76.7 FT.
MIN. REAR YARD	40 FT.	386.9 FT.

SHEET 1 OF 4 COVER SHEET
SHEET 2 OF 4 PROPOSED SITE DEVELOPMENT PLAN (60 SCALE)
SHEET 3 OF 4 PROPOSED SITE DEVELOPMENT PLAN (20 SCALE)
SHEET 4 OF 4 PROPOSED SUBSURFACE SEWAGE DESIGN PLAN

LIST OF DRAWINGS

COMMONWEALTH OF MASSACHUSETTS
JOHN E. FINLAY II
CIVIL
No. 36718
REGISTERED PROFESSIONAL ENGINEER
7/10/19

DATE	ISSUE	REVISION	DESCRIPTION	APP.
07/10/19	2	SITE PLAN REVIEW ADDITIONS		JEF

COVER SHEET
PREPARED FOR
JASON J. SOUTHWICK
103 MARSHALL STREET
LEICESTER, MASSACHUSETTS

FINLAY ENGINEERING SERVICES
625 CHANDLER STREET
WORCESTER, MASSACHUSETTS

DES. JEF | DWN. STF | CHK. JEF
SCALE: NONE | DATE: 01/15/19
PLAN NUMBER: 180008 | SHEET: 1 OF 4

PLAN BOOK 748 PLAN 4

N

N/F FRANLYNJ. & KERRY J. SCOLA

N/F ALBERT B. & SHIRLEY J. SOUTHWICK, TRUSTEES OF MARSHALL STREET TRUST

N/F JASON J. SOUTHWICK

N/F WORCESTER AIRPORT COMMISSION

N/F JASON J. SOUTHWICK,

N/F 434 MULBERRY, LLC

MARSHALL STREET (PUBLIC-VARIABLE WIDTH)

WWW/DH FND

DH FND

CB/DH FND

DH FND

CB/DH FND

DH FND

S25°43'13"W 117.21

S26°50'29"W 129.43

N79°27'09"W 149.14

N76°45'11"W 228.18

N70°36'38"W 111.98

N70°49'43"W 276.37

S07°13'24"E 150.81

S09°01'43"E 229.45

S07°56'45"E 92.14

S10°03'25"E 75.02

S10°45'26"E 103.05

S06°41'37"E 50.91

S10°38'44"E 87.61

S06°59'52"E 60.52

S07°60'00"E N59°58'52"E

S00°10'51"E 63.28

S30°40'34"E

N15°02'44"W 186.71

N08°38'46"E 364.13

N11°24'22"E 231.46

N09°20'04"E 198.28

N08°55'33"E 171.03

N20°16'58"W 1023.49

L1	S83°26'50"E	43.55'
L2	S60°22'50"E	18.67'
L3	S15°33'29"E	39.38'
L4	S02°05'35"W	30.48'
L5	S05°39'22"E	48.32'
L6	S12°06'48"E	33.08'
L7	S15°39'48"E	32.05'
L8	S35°24'44"E	33.52'
L9	S39°08'27"E	43.07'
L10	S14°42'21"E	42.66'
L11	N77°14'50"W	54.07'
L12	N77°56'14"W	65.07'
L13	N00°10'51"W	72.82'

L14	N68°58'33"E	14.66'
L15	S88°10'31"E	16.39'
L16	N04°01'42"W	27.82'
L17	N34°43'22"E	15.76'
L18	N46°47'37"E	19.33'
L19	N04°52'25"E	5.18'
L20	N40°44'45"E	32.38'
L21	S77°11'32"E	13.99'

PARCEL B
AREA=12.17± ACRES

PARCEL A
AREA=7.57± ACRES

EXISTING RIGHT OF WAY, ACCESS, UTILITY & LANDSCAPE EASEMENT

EXISTING RIGHT OF WAY & AND ACCESS EASEMENT

EXISTING GRAVEL DRIVE

EXISTING GRAVEL PARKING AREA (26 SPACES)

100' PROPOSED BUILDING

W/F GARAGE

TREELINE

HEDGE

NO. 103 1 1/2 STY

UP #26 UP #26-1 UP #26-2 UP #26-3 UP #26-5 UP #26-7 UP #26-9

OHW

TP-1 TP-2 TP-3 TP-4

P-1 P-2 P-3

P-VENT

LP

ST PC

155.3'

40'

NOTES:

1.) DEED REFERENCE: W.D.R.D. BK. 51300 PG. 383

2.) ASSESSOR'S REFERENCE: MAP 5 A3. 10

3.) ZONING CLASSIFICATION: SUBURBAN AGRICULTURE

4.) PLAN REFERENCE: W.D.R.D. PLAN BK. 748 PLAN 4
W.D.R.D. PLAN BK. 784 PLAN 26
W.D.R.D. PLAN BK. 723 PLAN 99

5.) THIS SURVEY WAS PREPARED WITHOUT THE BENEFIT OF A TITLE REPORT AND IS SUBJECT TO THE FINDINGS SUCH A REPORT MIGHT DISCLOSE.

ZONING DISTRICT: SUBURBAN AGRICULTURE
MINIMUM LOT AREA: 80,000 S.F.
MINIMUM FRONTAGE: 200 FT.
MINIMUM FRONT YARD: 40 FT.
MINIMUM SIDE YARD: 40 FT.
MINIMUM REAR YARD: 40 FT.

PROPOSED PARKING SPACE REQUIREMENTS

BUSINESS AND PROFESSIONAL OFFICES USE:
1200 S.F. @ 1 SPACES/350 S.F. GROSS FLOOR AREA= 4 SPACES

RETAIL BUSINESS USE:
2800 S.F. @ 1 SPACES/200 S.F. GROSS FLOOR AREA= 14 SPACES

TOTAL PROPOSED PARKING SPACES REQUIRED: 18 SPACES

TOTAL EXISTING PARKING SPACES PROVIDED: 26 SPACES

PARKING SPACE DIMENSIONS:
MINIMUM PARKING SPACE: 10' X 20'
HANDICAPPED PARKING SPACE: 8' X 20'

PLAN
SCALE: 1"= 60'
0' 60' 120' 180'

OWNER OF RECORD:
JASON J. SOUTHWICK
DEED BK. 51300 PG. 383

COMMONWEALTH OF MASSACHUSETTS JOHN E. FINLAY II CIVIL No. 34718 REGISTERED PROFESSIONAL ENGINEER

7/10/19

DATE	ISSUE	REVISION DESCRIPTION	APP.
07/10/19	2	SITE PLAN REVIEW ADDITIONS	JEF

PROPOSED SITE DEVELOPMENT PLAN

PREPARED FOR

JASON J. SOUTHWICK
103 MARSHALL STREET
LEICESTER, MASSACHUSETTS

FINLAY ENGINEERING SERVICES
625 CHANDLER STREET
WORCESTER, MASSACHUSETTS

DES. JEF | DWN. TJF | CHK. JEF
SCALE: 1"=60' | DATE: 01/15/19
PLAN NUMBER: 180008 | SHEET: 2 OF 4

PLAN BOOK 748 PLAN 4

N

N20°10'58"W
1023.49'

TBM EL. = 96.62
SPIKE SET IN UP #26-7

UP #26-7

UP #26-9

UP #26-5

76.7'

OHW

EXISTING GRAVEL DRIVEWAY

PROVIDE OVERFLOW

RL

TP-4

RECHARGE TRENCH

8"

EXISTING
GRAVEL
PARKING
AREA
(26 SPACES)

20'

10'

PROPOSED
BUILDING
SILL EL.=102.0

100'

40'

11'

ST

PC

PROPOSED 2" (SCH 40) PVC FORCE MAIN

PROPOSED 1500
GALLON (H-20)
SEPTIC TANK

PROPOSED 1000
GALLON
PUMP CHAMBER

155.3'

PW

EW

EXISTING
WELL

GAZEBO

FURNACE

OHW

100'

NO. 103
1 1/2 STY
W/F
2 BEDROOMS

HEDGE

ADD VENT

EXISTING DIST. BOX

TP-2

P-2

TP-1

P-1

100% EXP.
AREA

TP-3

P-3

EXISTING LEACH FIELD
SEE DESIGN PLAN PREPARED BY
J.P. ENGINEERING DATED
APRIL 11, 2000.

I=95.21 (AS-BUILT)

EXISTING 1500
GALLON
SEPTIC TANK

I=95.46 (AB)
I=95.75 (AB)

LP

N70°35'38"W
111.99'

TREELINE

S

84 86 88 90 92 94 96 98 100 102

26

PLAN
SCALE: 1"=20'

FINISH GRADE MIN.
MIN. SLOPE - 2%

CULTEC NO. 410
NON-WOVEN GEOTEXTILE
ON TOP AND SIDES

CULTEC CHAMBERS
MODEL: CONTACTOR 100 HD
OR APPROVED EQUAL

1/2" WASHED CRUSHED STONE

6" MIN. BACKFILL

6" MIN.

12.5"

6"

ELEV.= 97.5

36"

CULTEC NO. 66 WOVEN GEOTEXTILE
(FOR SCOUR PROTECTION) TO BE
PLACED BENEATH ALL INLET/OUTLET
PIPES

TYPICAL RECHARGE CHAMBER SECTION
NO SCALE

LEGEND

100	EXISTING CONTOUR
100	PROPOSED CONTOUR
ESMH	EXISTING SEWER MANHOLE
FM	PROPOSED FORCE MAIN
EW	EXISTING WATER LINE
PW	PROPOSED WATER LINE
RL	PROPOSED RAIN LEADER
OHW	EXISTING OVERHEAD WIRE

COMMONWEALTH OF MASSACHUSETTS
JOHN E. FINLAY II
CIVIL
No. 34718
REGISTERED PROFESSIONAL ENGINEER

7/10/19

OWNER OF RECORD:
JASON J. SOUTHWICK
DEED BK. 51300 PG. 383

DATE	ISSUE	REVISION	DESCRIPTION	APP.
07/10/19	2	SITE PLAN REVIEW ADDITIONS		JEF

PROPOSED SITE DEVELOPMENT PLAN
PREPARED FOR
JASON J. SOUTHWICK
103 MARSHALL STREET
LEICESTER, MASSACHUSETTS

FINLAY ENGINEERING SERVICES
625 CHANDLER STREET
WORCESTER, MASSACHUSETTS

DES. JEF | DWN. STF | CHK. JEF
SCALE: 1"=20' | DATE: 01/15/19
PLAN NUMBER 180008 | SHEET: 3 OF 4

DEEP HOLE 1 DATE: 08/04/99

DEEP OBSERVATION HOLE LOG

DEPTH FROM GROUND SURFACE (INCHES)	SOIL HORIZON	SOIL TEXTURE (USDA)	SOIL COLOR (MUNSELL)	SOIL MOTTLING	OTHER CONSISTENCE, STRUCTURE, ROCK FRAGMENTS, % VOLUME, ETC.
0"–8"	A	F.S.L.	10YR3/3	----	MASSIVE TO CRUMB, FRIABLE
8"–24"	Bw	L.S.	10YR5/6	----	GRANULAR, VERY FRIABLE
24"–74"	C1	S.L	2.5Y5/6	> 5% 7.5YR5/8 & 2.5Y7/1 @ 24"	MASSIVE, FRIABLE
74"–108"	C2	S.L	2.5Y4/3	@ 24"	MASSIVE, FIRM

* MINIMUM OF TWO HOLES REQUIRED AT EVERY PROPOSED DISPOSAL AREA
PARENT MATERIAL (GEOLOGIC): GLACIAL TILL DEPTH TO BEDROCK : MORE @ 108"
DEPTH TO GROUNDWATER: STANDING WATER IN HOLE N.E. WEEPING FROM PIT FACE N.E.
ESTIMATED SEASONAL HIGH GROUND WATER : 24"

DEEP HOLE 2 DATE: 08/04/99

DEEP OBSERVATION HOLE LOG

DEPTH FROM GROUND SURFACE (INCHES)	SOIL HORIZON	SOIL TEXTURE (USDA)	SOIL COLOR (MUNSELL)	SOIL MOTTLING	OTHER CONSISTENCE, STRUCTURE, ROCK FRAGMENTS, % VOLUME, ETC.
0"–10"	A	F.S.L.	10YR3/2	----	MASSIVE TO CRUMB, FRIABLE
10"–26"	Bw	L.S.	10YR7/8	----	GRANULAR, VERY FRIABLE
26"–84"	C1	S.L	2.5Y5/4	> 5% 7.5YR5/8 & 2.5Y7/1 @ 28"	MASSIVE, FRIABLE
84"–108"	C2	S.L	2.5Y4/3	@ 28"	MASSIVE, FIRM

* MINIMUM OF TWO HOLES REQUIRED AT EVERY PROPOSED DISPOSAL AREA
PARENT MATERIAL (GEOLOGIC): GLACIAL TILL DEPTH TO BEDROCK : MORE @ 108"
DEPTH TO GROUNDWATER: STANDING WATER IN HOLE N.E. WEEPING FROM PIT FACE N.E.
ESTIMATED SEASONAL HIGH GROUND WATER : 28"

DEEP HOLE 3 DATE: 08/04/99

DEEP OBSERVATION HOLE LOG

DEPTH FROM GROUND SURFACE (INCHES)	SOIL HORIZON	SOIL TEXTURE (USDA)	SOIL COLOR (MUNSELL)	SOIL MOTTLING	OTHER CONSISTENCE, STRUCTURE, ROCK FRAGMENTS, % VOLUME, ETC.
0"–8"	A	F.S.L.	10YR3/2	----	MASSIVE TO CRUMB, FRIABLE
8"–26"	Bw	L.S.	10YR5/6	----	GRANULAR, VERY FRIABLE
26"–80"	C1	S.L	2.5Y5/6	> 5% 7.5YR5/8 & 2.5Y7/1 @ 25"	MASSIVE, FRIABLE
80"–100"	C2	S.L	2.5Y4/3	@ 25"	MASSIVE, FIRM

* MINIMUM OF TWO HOLES REQUIRED AT EVERY PROPOSED DISPOSAL AREA
PARENT MATERIAL (GEOLOGIC): GLACIAL TILL DEPTH TO BEDROCK : MORE @ 100"
DEPTH TO GROUNDWATER: STANDING WATER IN HOLE N.E. WEEPING FROM PIT FACE N.E.
ESTIMATED SEASONAL HIGH GROUND WATER : 26"

DEEP HOLE 4 DATE: 07/09/19 ELEV.=98.0

DEEP OBSERVATION HOLE LOG

DEPTH FROM GROUND SURFACE (INCHES)	SOIL HORIZON	SOIL TEXTURE (USDA)	SOIL COLOR (MUNSELL)	SOIL MOTTLING	OTHER CONSISTENCE, STRUCTURE, ROCK FRAGMENTS, % VOLUME, ETC.
0"–8"	Ap	S.L	10YR3/3	----	MASSIVE TO CRUMB, FRIABLE
8"–24"	Bw	S.L	10YR5/6	----	MASSIVE, FRIABLE
24"–60"	C	S.L	10YR5/6	> 5% 10YR5/2 10YR5/8 @ 28"	MASSIVE, FRIABLE

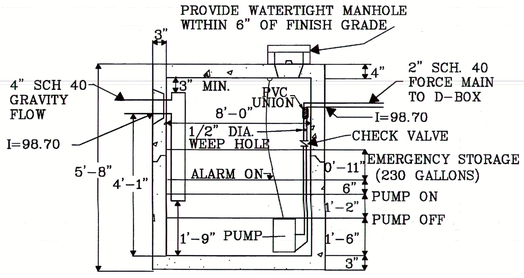
* MINIMUM OF TWO HOLES REQUIRED AT EVERY PROPOSED DISPOSAL AREA
PARENT MATERIAL (GEOLOGIC): GLACIAL TILL DEPTH TO BEDROCK : MORE @ 60"
DEPTH TO GROUNDWATER: STANDING WATER IN HOLE N.E. WEEPING FROM PIT FACE N.E.
ESTIMATED SEASONAL HIGH GROUND WATER : 28"

BREAKOUT CALCULATIONS

BREAKOUT EL.= 95.24
DISTANCE = 15' MIN.

PUMP SYSTEM NOTES

1.) SPECIFICATION FOR SIMPLEX INJECTOR PUMP: GOULD SUBMERSIBLE PUMP MODEL 3887, SERIES NO. WS0312BF, 230 VOLT, 4.95 AMPS, SINGLE PHASE, 1/3 HP OR APPROVED EQUAL.
2.) FOUR (4) FEET OF MINIMUM COVER MUST BE MAINTAINED OVER THE ENTIRE LENGTH OF THE 2" FORCE MAIN. THE FORCE MAIN WILL BE INSULATED TO PREVENT FREEZING IN AREAS WHERE THE COVER REQUIREMENT CANNOT BE MET.
3.) THE ALARM SHALL BE ON A SEPARATE CIRCUIT AND BE IN A "NOTICABLE AREA" AS AGREED UPON WITH THE BOARD OF HEALTH. ALARM SHALL BE BOTH AUDIBLE AND VISUAL. APPLICABLE CODES.
4.) PUMP AND CONTROL FLOATS SHALL BE READILY VISIBLE AND REMOVABLE. CONTROLS SHALL BE SELF CONTAINED, MERCURY SWITCH FLOATS. NO SPLICES ON ANY WIRES SHALL BE ALLOWED WITHIN THE PUMP CHAMBER. ALL ELECTRICAL WORK SHALL CONFORM WITH
5.) CONTRACTOR SHALL ASCERTAIN POWER IS AVAILABLE PRIOR TO ORDERING PUMP AND ACCESSORIES. THE CONTRACTOR WILL OBTAIN AN ELECTRICAL PERMIT FROM THE TOWN OF LEICESTER CODE DEPARTMENT.



PLACE ON 6" LEVEL AND STABLE GRAVEL BASE

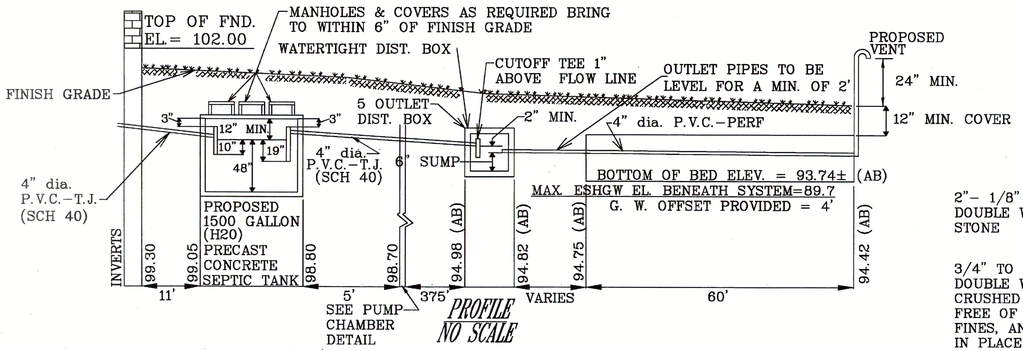
PUMP CHAMBER DETAIL

NO SCALE

PUMP CHAMBER: CHASE PRECAST PRODUCT NO. ST1000A (INSIDE DIM. 8' X 4.5') OR APPROVED EQUAL BY DESIGN ENGINEER

GENERAL NOTES

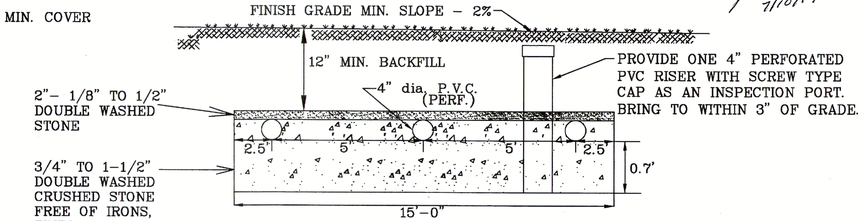
1.) A PROPERTY LINE SURVEY WAS PERFORMED AT THIS TIME BY FINLAY ENGINEERING SERVICES.
2.) ALL CONSTRUCTION TO CONFORM TO TITLE 5 OF THE MASSACHUSETTS STATE ENVIRONMENTAL CODE AND THE BOARD OF HEALTH REQUIREMENTS FOR THE TOWN OF LEICESTER, MASSACHUSETTS.
3.) TIGHT JOINT PIPING TO CONSIST OF POLYVINYL CHLORIDE PIPE (P.V.C.) , SCHEDULE 40 , UNLESS OTHERWISE NOTED.
4.) HEAVY MACHINERY NOT PERMITTED TO PASS OVER PIPE LEACHING AREA.
5.) UNDERGROUND UTILITY INFORMATION IS PLOTTED FROM VISIBLE FIELD LOCATIONS AND AVAILABLE RECORDS. THE LOCATIONS ARE APPROXIMATE ONLY AND VERIFICATION MUST BE MADE IN THE FIELD.
6.) NO GARBAGE DISPOSAL IS ALLOWED WITH THIS DESIGN.
7.) THERE ARE NO STREAMS OR WETLANDS LOCATED WITHIN 100 FEET OF THIS SYSTEM. THERE ARE NO CATCH BASINS LOCATED WITHIN 50 FEET OF THIS SYSTEM.
8.) NO FOOTING DRAINS OR DRY WELLS ARE TO BE LOCATED WITHIN 20 FEET OF THE LEACHING SYSTEM OR THE EXPANSION AREA OR WITHIN 10 FEET OF THE SEPTIC TANK.
9.) THIS PLAN IS FOR THE DESIGN AND CONSTRUCTION OF THE SUBSURFACE SEWAGE DISPOSAL SYSTEM ONLY .
10.) NO CHANGE SHALL BE MADE TO THIS PLAN WITHOUT THE APPROVAL OF THE DESIGN ENGINEER AND THE BOARD OF HEALTH.
11.) A COPY OF THIS PLAN MUST BE FURNISHED TO THE CONTRACTOR CONSTRUCTING THE SYSTEM AND A COPY MUST BE KEPT ONSITE DURING CONSTRUCTION .
12.) ELEVATION DATUM IS ASSUMED .
13.) FOR PROPER PERFORMANCE SEPTIC TANK SHOULD BE INSPECTED AT LEAST ONCE A YEAR AND WHEN THE TOTAL DEPTH OF SCUM AND SOLIDS EXCEEDS 1/3 THE LIQUID DEPTH OF THE TANK THE TANK SHOULD BE PUMPED (USUALLY TWO YEARS).
14.) MAGNETIC TAPE SHALL BE INSTALLED ON ALL SYSTEM COMPONENTS.
15.) THERE ARE NO KNOWN PRIVATE WATER SUPPLY WELLS WITHIN 150 FEET OF THE PROPOSED SUBSURFACE SEWAGE DISPOSAL SYSTEM. THERE ARE NO KNOWN SURFACE WATER SUPPLIES OR GRAVEL PACKED PUBLIC WATER SUPPLY WELLS WITHIN 400 FEET OF THE PROPOSED SUBSURFACE SEWAGE DISPOSAL SYSTEM. THERE ARE NO KNOWN TUBULAR PUBLIC WATER SUPPLY WELLS WITHIN 250 FEET OF THE PROPOSED SUBSURFACE SEWAGE SYSTEM.



PROFILE

NO SCALE

NOTE: AS–BUILT INVERT ELEVATIONS FOR THE DISTRIBUTION BOX AND LEACH FIELD ARE ACCORDING TO THE AS–BUILT PLAN AS PREPARED BY J. P. ENGINEERING DATED SEPTEMBER 6, 2000.



EXISTING LEACH BED SECTION

NO SCALE

OWNER OF RECORD:
JASON J. SOUTHWICK
DEED BK. 51300 PG. 383

LEGEND

— —100— — INDICATES EXISTING CONTOUR
100 INDICATES PROPOSED CONTOUR
T.P. 1 INDICATES TEST PIT LOCATION AND NUMBER
P–1 INDICATES PERC TEST LOCATION & NUMBER

PERCOLATION TEST DATA

PERC:	1	2	3
DEPTH:	50"	46"	48"
RATE:	11 M.P.I.	16 M.P.I.	DISCONTINUED
DATE:	08/04/1999	08/04/1999	08/04/1999

TEST PERFORMED BY : STEPHEN SEARS, DAVID E. ROSS ASSOCIATES, INC.
TEST WITNESSED BY: EARL BERNIER, R.S., T/O LEICESTER BOH
SOIL EVALUATION BY: STEPHEN SEARS, DAVID E. ROSS ASOCIATES, INC.

DESIGN DATA

1.) ESTIMATED HYDRAULIC LOADING :
(EXISTING) 2 BEDROOMS AT 110 GALLONS/DAY/BEDROOM = 220 G.P.D.
(PROPOSED) RETAIL/STORAGE: 2800 S.F. X 50 GPD/1000 S.F.= 140 G.P.D.
(PROPOSED) OFFICE SPACE: 1200 S.F. X 75 GPD/1000 S.F.= 90 G.P.D.
TOTAL = 450 G.P.D.

2.) SEPTIC TANK SIZE: 1500 GALLONS

3.) LEACHING AREA BASED ON A PERCOLATION RATE OF 20 M.P.I.
TOTAL SIDEWALL AREA: 0 S.F AT 0.53 GALS./S.F. = 0 G.P.D.
TOTAL BOTTOM AREA: 900 S.F. AT 0.53 GALS./S.F. = 477 G.P.D.
MAXIMUM ALLOWABLE LOADING UNDER TITLE 5 = 477 G.P.D.
ACTUAL HYDRAULIC LOADING = 450 GALS/DAY

COMMONWEALTH OF MASSACHUSETTS
JOHN E. FINLAY II
CIVIL
No. 34718
REGISTERED PROFESSIONAL ENGINEER

7/10/19

DATE	ISSUE	REVISION	DESCRIPTION	APP.
07/10/19	2	SITE PLAN REVIEW ADDITIONS		JEF

PROPOSED SUBSURFACE SEWAGE DISPOSAL SYSTEM
PREPARED FOR
JASON J. SOUTHWICK
103 MARSHALL STREET
LEICESTER, MASSACHUSETTS

FINLAY ENGINEERING SERVICES
625 CHANDLER STREET
WORCESTER, MASSACHUSETTS

DES. JEF | DWN. STF | CHK. JEF
SCALE: 1"=20' | DATE: 01/15/19
PLAN NUMBER 180008 | SHEET: 4 OF 4