FIELD EVALUATION SHEET

PRELIMINARY EVALUATION DATE 7-12-20, FIELD EVALUATION DATE 7-12-20
PROPERTY OWNER: Randy Sletti PHONE 218-927-2224
ADDRESS: 28842 358th AVE CITY,STATE,ZIP: Aitkin, MN 56431
LEGAL DESCRIPTION: 40 ACRES NW-NW
PIN# 24-0-068500 SEC 36 T 46 R 26 TWP NAME Nord Land
FIRE# — LAKE/RIVER No LAKE CLASS No OHWL ____ FT.

DESCRIPTION OF SOIL TREATMENT AREAS

	AREA #1	AREA #2
DISTURBED AREAS	YES ___ NO X	YES ___ NO X
COMPACTED AREAS	YES ___ NO X	YES ___ NO X
FLOODING	YES ___ NO X	YES ___ NO X
RUN ON POTENTIAL	YES ___ NO X	YES ___ NO X
SLOPE %	2	2
DIRECTION OF SLOPE	ETOW	ETOW
LANDSCAPE POSITION	Side yard	Side Yard
VEGETATION TYPES	grass	grass

REFERENCE BM ELEV. 100 FT.
REFERENCE BM DESCRIPTION
Mobile home site = 100

DEPTH TO STANDING WATER OR MOTTLED SOIL: BORING# 1 8', 1A 8', 2 8', 2A 8'

BOTTOM ELEVATION--FIRST TRENCH OR BOTTOM OF ROCK BED: #1 ____ FT., #2 ____ FT.

SOIL SIZING FACTOR: SITE #1 1.27, SITE #2 1.27

CONSTRUCTION RELATED ISSUES:

LIC# 1054 SITE EVALUATOR SIGNATURE: Tom Antonsen
SITE EVALUATOR NAME: Tom Antonsen TELEPHONE# 218-851-7757
LUG REVIEW DATE 7-19-20

Comments:

SOIL BORING LOGS ON REVERSE SIDE

SOILS CHARTS FOR BOTH PROPOSED AND ALTERNATE SITES

1 (PROPOSED) SOILS DATA

DEPTH (INCHES)	TEXTURE	MUNSELL COLOR
8"	topsoil	10yr3/2
8-96"	Sand	10yr4/4
Pit		
no mottles		

2 (PROPOSED) SOILS DATA

DEPTH (INCHES)	TEXTURE	MUNSELL COLOR
9"	top Soil	10yr3/2
9-96"	10yr4/4 Sand	
Pit		
No mottles		

1 (ALTERNATE) SOILS DATA

DEPTH (INCHES)	TEXTURE	MUNSELL COLOR
8"	topsoil	10yr3/2
96"	Sand	10yr4/4
Pit		
No mottles		

2 (ALTERNATE) SOILS DATA

DEPTH (INCHES)	TEXTURE	MUNSELL COLOR
8"	Topsoil	10yr3/2
96"	Sand	10yr4/4
Pit		
not mottled		

ADDITIONAL SOIL BORINGS MAY BE REQUIRED

TRENCH AND BED WORKSHEET

1. AVERAGE DESIGN FLOW

A. Estimated 300 gpd *(see figure A-1)*
or measured ___ x 1.5 *(safety factor)* = ___ gpd

B. Septic tank capacity 1000 gal *(see figure C-1)* minimum
* use 1500 compartment tank

A-1: Estimated Sewage Flows in Gallons per Day				
number of bedrooms	Class I	Class II	Class III	Class IV
(2)	(300)	225	180	60%
3	450	300	218	of the
4	600	375	256	values
5	750	450	294	in the
6	900	525	332	Class I,
7	1050	600	370	II, or III
8	1200	675	408	columns.

2. SOILS *(Site evaluation data)*

C. Depth to restricting layer = 8' ft
D. Max depth of system Item 2C - 3 ft = 7 ft - 3 ft = 4 ft
E. Texture Sand Percolation rate _____ MPI
F. Soil Sizing Factor (SSF) 1.27 sqft/gpd *(see figure D-15)*
G. % Land Slope 2 %

C-1: Septic Tank Capacities (in gallons)			
Number of Bedrooms	Minimum Liquid Capacity	Liquid capacity with garbage disposal	Liquid capacity with disposal & lift inside
2 or less	750	1125	1500
3 or 4	1000	1500	2000
5 or 6	1500	2250	3000
7, 8 or 9	2000	3000	4000

3. TRENCH or BED BOTTOM AREA

H. For trenches with 6 inches of rock below the pipe:
A x F = _____ gpd x _____ sqft/gpd = _____ sqft

I. For trenches with 12 inches of rock below the pipe:
A x F x 0.8 = 300 gpd x 1.27 sqft/gpd x 0.8 = 305 sqft

J. For trenches with 18 inches of rock below the pipe:
A x F x 0.66 = _____ gpd x _____ sqft/gpd x 0.66 = _____ sqft

K. For trenches with 24 inches of rock below the pipe:
A x F x 0.6 = _____ gpd x _____ sqft/gpd x 0.6 = _____ sqft

L. For gravity beds with 6 or 12 inches of rock below the pipe;
1.5 x A x F = 1.5 x ___ gpd x ___ sqft/gpd = ___ sqft
For pressure beds with 6 or 12 inches of rock below the pipe;
A x F = ___ gpd x ___ sqft/gpd = _____ sqft

D-15: Soil Characteristics and Soil Sizing Factor (SSF) (> 3' separation)		
Percolation Rate minutes per inch (mpi)	Soil Texture	Soil Sizing Factor square feet/gallon per day (sqft/gpd)
faster than 0.1*	Coarse sand	0.83
0.1 to 5*	Medium sand	0.83
	Loamy sand	
0.1 to 5**	Fine sand	1.67
6 to 15	Sandy loam	1.27
16 to 30	Loam	1.67
31 to 45	Silt loam	2.00
	Silt	
46 to 60	Clay loam	2.20
	Sandy clay	
	Silty clay	
over 61 to 120***	Clay	4.20
	Sandy clay	
slower than 120****	Silty clay	

*Use systems for rapidly permeable soils: pressure distribution or serial distribution with no trench >25% of the total system.
**Soil having 50% or more fine sand plus very fine sand.
***A mound must be used.
****An other or performance system must be used

4. DISTRIBUTION *(Check all that apply)*

___ Bed (< 6% slope)	___ Drop boxes (any slope)	___ Rock
___ Trenches	___ Distribution box (< 3%)	___ Chamber
___ Pressure	___ Gravity	___ Gravelless

5. SYSTEM WIDTH, LENGTH and VOLUME

M. Select trench width = _____ ft

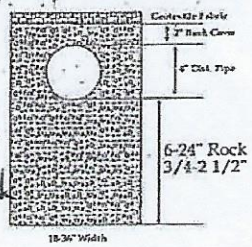
N. If using rock, divide bottom area by width: (H, I, J,K or L) ÷ M =
_____ sqft ÷ _____ ft= _____ lineal feet
Rock depth below distribution pipe plus 0.5 foot times bottom area:
Rock depth in feet + 0.5 feet x Area (H,I,J,K, or L)
(___ ft + 0.5 ft) x ___ sqft = _____ cuft
Volume in cubic yards = cuft ÷27
_____ cuft ÷ 27 = _____ cuyds
Weight of rock in tons = cubic yds x 1.4
_____ cuyds x 1.4 = _____ tons

D-9: Soil Characteristics and Soil sizing factors (SSF) for Gravelless Pipe		
percolation rate (minutes/inch)	soil texture	lineal feet/ gallon/day
Faster than 0.1*	Coarse Sand	---
0.1 to 5	Medium Sand	0.28
	Loamy Sand	
0.1 to 5	Fine Sand **	0.6
6 to 15	Sandy Loam	0.42
16 to 30	Loam	0.56
31 to 45	Silt Loam	0.67
	Silt	
46 to 60	Clay Loam (CL)	0.74
	Sandy CL	
	Silty CL	
slower than 60***	Clay	---
	Sandy Clay	
	Silty Clay	

*Soil too coarse for sewage treatment. Use systems for rapidly permeable soils.
**Soil having 50% or more fine sand + very fine sand.
***Soil with too high a percentage of clay for installation of a standard inground system.

O. If using 10" Gravelless Pipe, Flow (A) x Gravelless SSF *(see figure D-9)*
_____ gpd x ___ lineal feet/gpd = _____ lineal feet

P. If using Chambers, H,I,J, or K(based on hieght of chamber slats) ÷ width of chamber in feet(M)
305 sqft ÷ 3 ft= 102 lineal ft 2-3x52' trenches
USE high capacity Infiltrator Chambers 13 chambers per trench



6. LAWN AREA

Q. Select trench spacing, center to center = 8 feet

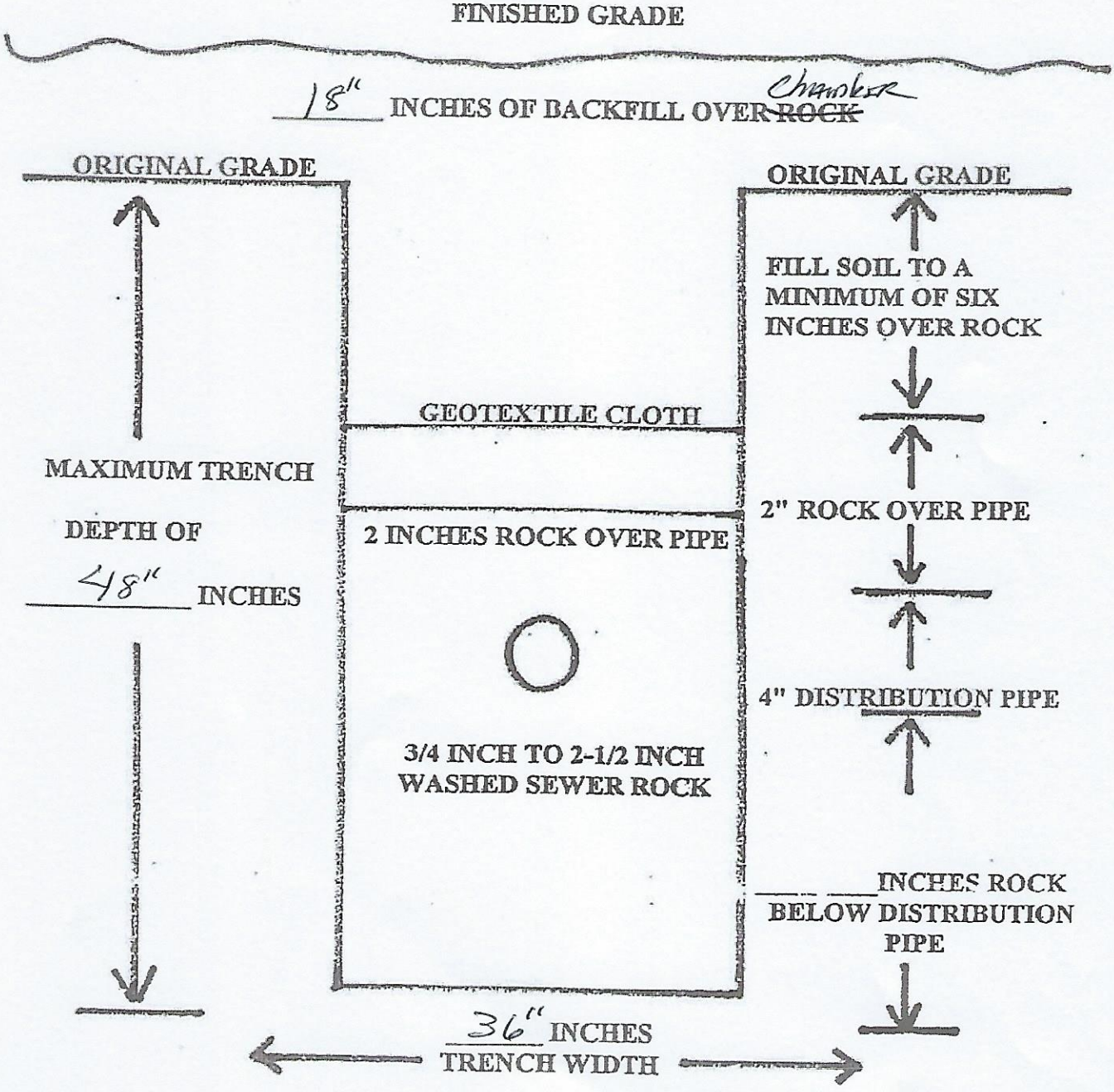
R. Multiply trench spacing by lineal feet R x Q = sqft of lawn area
102 ft x 8 ft = 816 sqft

7. Include a drawing with scale (one inch = _____ ft). Show pertinent boundaries, right of way, easements, location of house, garage, driveway, all other imporvements, existing or proposed soil treatment system, well and dimensions of all elevations, setbacks and separation distances.

I hereby certify that I have completed this work in accordance with applicable ordinances, rules and laws.

_____ (signature) _____ (license #) _____ (date)

TRENCH CROSS-SECTION



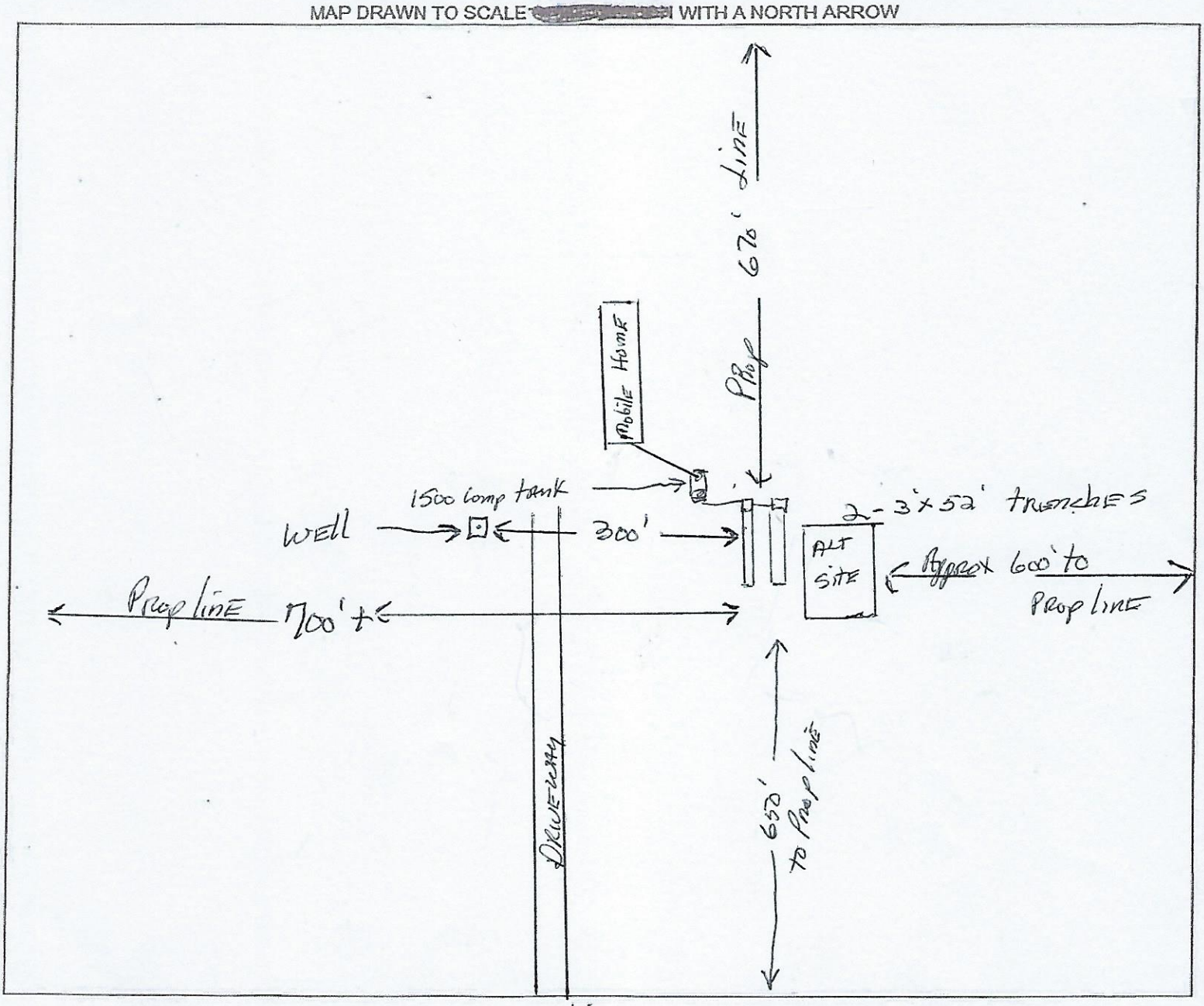
USE high capacity Infiltrator chambers

SKETCH SHEET

CLIENT: Randy Slethi

DATE: 7-19-20

MAP DRAWN TO SCALE [redacted] WITH A NORTH ARROW



CHECK OFF LIST--HAVE ALL OF THE FOLLOWING BEEN DRAWN ON THE MAP??

SHOW EXISTING OR PROPOSED

- ☐ WATER WELLS WITHIN 100 FT OF TREATMENT AREAS
- ☐ PRESSURE WATER LINES WITHIN 10 FT OF TREATMENT AREAS
- ☐ STRUCTURES ☐ LOT IMPROVEMENTS
- ☐ ALL SOIL TREATMENT AREAS ☐ ALL ISTS COMPONENTS
- ☐ HORIZONTAL AND VERTICALREFERENCE
- ☐ POINT OF SOIL BORINGS ☐ DIRECTION OF SLOPE
- ☐ LOT EASEMENTS ☐ ALL LOT DIMENSIONS
- ☐ DISTURBED/ COMPACTED AREAS
- ☐ SITE PROTECTION--LATHE AND RIBBON EVERY 15 FT
- ☐ ACCESS ROUTE FOR TANK MAINTENANCE

REQUIRED SETBACKS

- ☐ STRUCTURES ☐ PROPERTY LINES
- ☐ OHWL

COMMENTS:

INDICATE ELEVATIONS

BENCHMARK ground at Home Site = 100
ELEVATION OF SEWER LINE @ HOUSE 99
ELEVATION @ TANK INLET 98
ELEVATION @ BOTTOM OF ROCK LAYER 96
ELEVATION @ BOTTOM OF BORING OR RESTRICTIVE LAYER 92
ELEVATION OF PUMP —
ELEVATION OF DISTRIBUTION DEVICE —

DESIGNER SIGNATURE Tom Antonsen

LICENSE# 1054

DATE 7-19-20