



Becker County Planning & Zoning  
 835 Lake Ave, P O Box 787  
 Detroit Lakes, MN 56502-0787  
 Phone (218)-846-7314; Fax (218)-846-7266

se/02  
 28.0297.000

**CONSTRUCTION SITE**

Onsite Septic System Site Evaluation/Design Tax Parcel Number 28.0297.000 911 Address 45470

Legal Description: Lot 16 Maple Shores Section 14 TWP 140N Range 38W Back Door Drive OR Maple Shores Drive

Lake Name Shell Lake Lake Classification \_\_\_\_\_ Township Name Shell Lake

Owner's Name Kenny Brau Address 38421 - 490th ave.

City Windom, mn. State/Zip 56101 Phone Number 507-678-2402

Number of Bedrooms 3 Well Casing Depth > 50' Garbage Disposal (Yes)  No  
 Design Flow 450 GPD Depth of other Wells within 100 ft of system N/A Grinder Pump/Lift Station In House (Yes)  No

Type of Observation: Probe Pit  Boring  
 Original Soil  Yes  No Compacted Soil (Yes)  No  
 Depth to Restricting Layer > 72"  
 Maximum of Depth of System 36"  
 Perc Rate 0.1-5 Soil Sizing Factor .83  
 Proposed Design  
 Replace Septic Tank  
 Septic Tank/Drainfield  
 Drainfield Only  
 Holding Tank  
 Lift Station  
 Type of Drainfield  
 Standard gravelless chamber  
 Standard (rock depth) \_\_\_\_\_  
 Standard Bed  
 Mound  At Grade  
 Pressurized Bed

**SOIL BORING LOG**

DEPTH (INCHES)	TEXTURE	COLOR & MUNSELL NO.	STRUCTURE
0"-4"	S. loam	7.5YR 3/1	BLOCKY PLATY PRISMATIC NONE
4"-12"	S. Loam	7.5YR 5/4	BLOCKY PLATY PRISMATIC NONE
12"-36"	med. sand	7.5YR 5/6	BLOCKY PLATY PRISMATIC NONE
36"-40"	course sand	7.5YR 5/8	BLOCKY PLATY PRISMATIC NONE
40"-58"	Fine sand	7.5YR 8/1	BLOCKY PLATY PRISMATIC NONE
58"-72"	Silt Loam	7.5YR 6/1	BLOCKY PLATY PRISMATIC NONE

**SOIL BORING LOG**

DEPTH (INCHES)	TEXTURE	COLOR & MUNSELL NO.	STRUCTURE
0"-12"	Sandy loam	7.5YR 3/1	BLOCKY PLATY PRISMATIC NONE
12"-20"	Sandy loam	7.5YR 5/4	BLOCKY PLATY PRISMATIC NONE
20"-44"	med. sand	7.5YR 5/6	BLOCKY PLATY PRISMATIC NONE
44"-48"	course sand	7.5YR 5/8	BLOCKY PLATY PRISMATIC NONE
48"-64"	Fine sand	7.5YR 8/1	BLOCKY PLATY PRISMATIC NONE
64"-72"	Silt clay	7.5YR 6/1	BLOCKY PLATY PRISMATIC NONE

Type of alarm Device on lift Station or Holding tank  
N/A

Attach perc test Information if Required

Sand Soil No Test Done

Name and Address of Designer JR Designs + Inspections, Inc. 50 Pleasant Ave. NE - Akeley, Mn. 56433 Phone 218-652-2211

MPCA Number 1795 Date of Site Evaluation 8-12-02 Signature of Designer Jon W. Rich

Name of Installer (if different from Designer) Ron Lindbom MPCA Number 1173

**\*FOR USE BY BECKER COUNTY ENVIRONMENTAL SERVICES DEPARTMENT ONLY\***

\*\*\* Any changes to the permit must first be approved by Becker County Planning & Zoning. No system shall be covered up without inspection by Becker County Planning & Zoning.

\*\*\* Inspections must be scheduled at least 24 hours prior to time requested.

Date Received 8.23.02 Application Fee 75.00 State Surcharge 0 Total 75.00

Application is hereby denied  
 Application is hereby granted to KENNETH BRAU to install an individual septic system according to the specifications of the site evaluation and design submitted to the Becker County Environmental Services Office. By Order of:

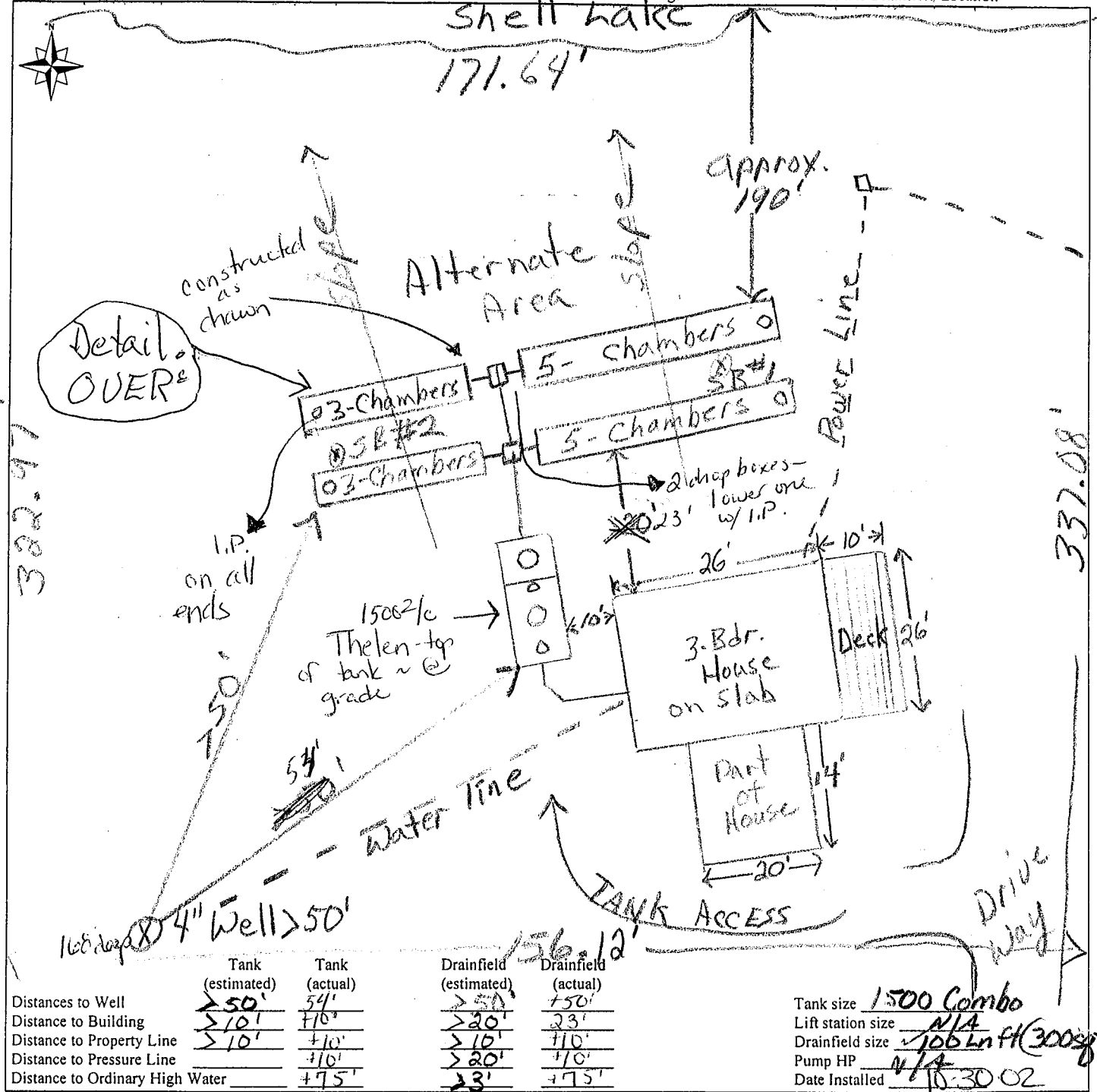
Signature of Becker County Qualified Employee Nancy Young Date Permit Issued 8.23.02  
 This permit expires on 8.23.03 Permit Number 18189

NOT valid until paid

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- \*Scale - One inch = \_\_\_\_\_ ft
- \*Location of any Unsuitable Soil
- \*Soil Borings & Per Test Locations
- \*Alternate Drainfield Location

- \*Dimensions of Lot
- \*Existing & Proposed Buildings
- \*Easements & setbacks
- \*Well & Water Line Locations within 100 ft of System
- \*Distance from Property Lines
- \*Tank Access Route
- \*Distance from OHWM
- \*Distance from buildings



	Tank (estimated)	Tank (actual)	Drainfield (estimated)	Drainfield (actual)
Distances to Well	>50'	54'	>50'	75'
Distance to Building	>10'	710'	>20'	23'
Distance to Property Line	>10'	710'	>10'	710'
Distance to Pressure Line		710'	>20'	710'
Distance to Ordinary High Water		775'	23'	775'

Tank size 1500 Combo  
 Lift station size N/A  
 Drainfield size 106 Ln ft (300 sq ft)  
 Pump HP N/A  
 Date Installed 10-30-02

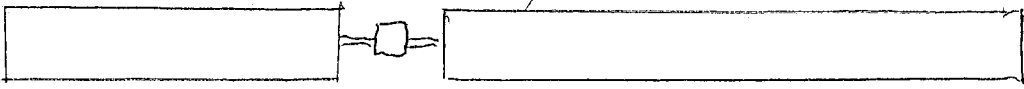
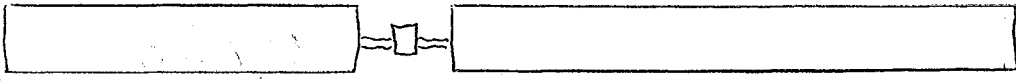
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CERTIFICATE OF COMPLIANCE

( ) Certificate Is Hereby Denied  
 (✓) Certificate is Hereby Granted Based upon the Application, addendum from, plans, specifications and all other supporting data. With property maintenance, this system can be expected to function satisfactory, however, this is not a guarantee.

Nancy Young Zoning Inspector 10.30.02  
 Signature Title Date

(Certificate of Compliance is not valid unless signed by a Registered Qualified Employee)



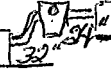
Approx. 10"-12" fill at this End -

12" Fill

20" Sandy Loam

32"

44" Med Sand



32" 34"

12" Sandy Loam

36" Med. Sand

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### TRENCH DESIGN SHEET

PROPERTY OWNER Kenny Brau TOWNSHIP Shell Lake <sup>911#</sup> FIRE# 45470  
 PERMIT# \_\_\_\_\_ PIN# \_\_\_\_\_ DATE 8-20-02  
 DESIGNER NAME JR Designs & Inspections, Inc. LICENSE# 1795  
 SIGNATURE: J.W. Rich DATE: 8-20-02 SITE EVALUATION # \_\_\_\_\_

#### WATER USE APPLIANCES (CHECK ALL THAT APPLY)

CLOTHES WASHER \_\_\_\_\_ WATER SOFTNER \_\_\_\_\_ DISHWASHER \_\_\_\_\_ WHIRLPOOL \_\_\_\_\_ HUMIDIFIER \_\_\_\_\_  
 NUMBER OF BEDROOMS 3 TYPE: I GARBAGE DISPOSAL: YES \_\_\_\_\_ NO X AIR TEST: YES X NO \_\_\_\_\_  
 WELL: DEEP (50'+) X SHALLOW \_\_\_\_\_ SETBACKS: TANK >50' DRAINFIELD >50' SEWER LINE >20'

Water line to house is >10' from sewer line. Test?

FLOW  
 A. ESTIMATED 450 GPD OR MEASURED GPD  
 B. SEPTIC TANK VOLUME 1500 GALLONS Combo  
 C. MINIMUM PUMP TANK VOLUME N/A GALLONS  
 C1. ALARM TYPE N/A

EST. FLOW IN GALLONS/ DAY (GPD)			
NUMBER OF BEDROOMS	TYPE I	TYPE II	TYPE III
2	300	225	180
<u>3</u>	<u>450</u>	300	218
4	600	375	258
5	750	450	294
6	900	525	332
7	1050	600	370
8	1200	675	408

SOILS  
 D. DEPTH TO RESTRICTING LAYER >72" FEET  
 E. MAXIMUM SYSTEM DEPTH (D-3) 36" FT OR \_\_\_\_\_ ELEV  
 F. PERCOLATION RATE 0.1-5 MPI  
 G. SOIL SIZING FACTOR .83 SQ FT/GPD

SEPTIC TANK CAPACITY		
NUMBER OF BEDROOMS	MINIMUM TANK CAPACITY GALLONS	MINIMUM CAPACITY GARBAGE DISPOSAL
2 OR LESS	1000	1500
<u>3 OR 4</u>	<u>1000</u>	1500
5 OR 6	1500	2250
7 OR 8	2000	3000
OVER 9	SEE FIG C-6	(x 1.5)

TRENCH BOTTOM AREA  
 H. 6 IN. OF ROCK OR GRAVELLESS: A x G = X = \_\_\_\_\_ SQ. FT.  
 I. 12 IN. OF ROCK: A x G x 0.8 = 450 x .83 x 0.8 = 298.8 SQ. FT.  
 J. 18 IN. OF ROCK: A x G x 0.66 = \_\_\_\_\_ x \_\_\_\_\_ x .66 = \_\_\_\_\_ SQ. FT.  
 K. 24 IN. OF ROCK: A x G x 0.6 = \_\_\_\_\_ x \_\_\_\_\_ x .6 = \_\_\_\_\_ SQ. FT.

SIZING FACTORS			
PERC RATE PI	SOIL TEXTURE	SQFT. GALLONS /DAY	GALLONS /DAY /SQFT.
< THAN 0.1	COARSE SAND	_____	_____
<u>0.1 TO 5</u>	SAND	<u>0.83</u>	1.20
0.1 TO 5	FINE SAND	1.67	0.60
6 TO 15	SANDY LOAM	1.27	0.79
18 TO 30	LOAM	1.67	0.60
31 TO 45	SILT LOAM	2.00	0.50
46 TO 60	CLAY LOAM	2.20	0.45
> THAN 60	CLAY	_____	(0.24)

~~BED BOTTOM AREA (6 OR 12 INCHES OF ROCK)  
 L. SEEPAGE BEDS: 1.5 x A x G = 1.5 x \_\_\_\_\_ x \_\_\_\_\_ = \_\_\_\_\_ SQ. FT.  
 M. PRESSURE BEDS: A x G = \_\_\_\_\_ x \_\_\_\_\_ = \_\_\_\_\_ SQ. FT.  
 ROCK VOLUME IN CU FT  
 N. ROCK DEPTH BELOW PIPE + 0.5 FT. x (H, I, J, K, L, M) = \_\_\_\_\_ CU FT.~~

ROCK VOLUME IN CU YDS      ROCK WEIGHT  
 O. N. \_\_\_\_\_ + 27 = \_\_\_\_\_ CU YDS      P.O. x 1.4 = \_\_\_\_\_ TONS

SYSTEM LENGTH  
 Q. BOTTOM AREA (H-K) 300 + TRENCH WIDTH 3' = 100' LINEAL FT  
Use Infiltrator 36" Chambers

LAWN AREA  
 R. SELECT TRENCH SPACING, CENTER TO CENTER = 7 FT.  
 S. MULTIPLY TRENCH SPACING BY LINEAL FEET R 7 x 100 = 700 SQ FT OF LAWN AREA

16-Chambers = 100.84ft  
2-Drop Box's  
4-Trenches

LUG APPROVAL: \_\_\_\_\_ DATE: \_\_\_\_\_

COMMENTS: \_\_\_\_\_