NOTES:

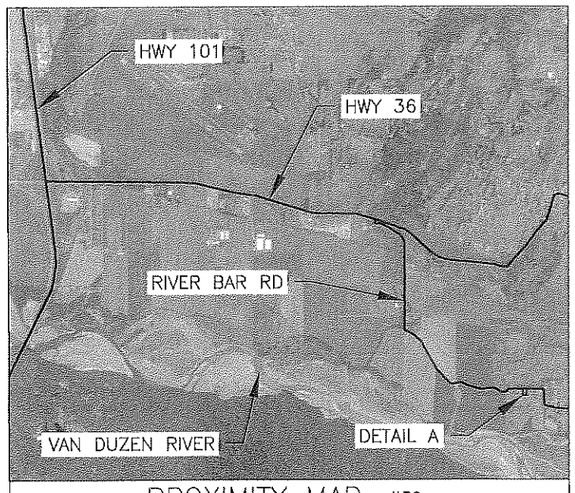
1. PRIVATE WATER
2. EASEMENTS–20 FEET FOR INGRESS/EGRESS ALONG EASTERN PROPERTY LINE.
3. NO TREES 12" DIAMETER OR GREATER TO BE REMOVED
4. NO KNOWN STREAM(S), SPRING(S), OR WETLAND(S) IN DEVELOPMENT AREA
5. SEPTIC FIELDS MUST BE AT LEAST 50' FROM ALL PROPERTY LINES WITHOUT SETBACK WAIVERS, 100' FROM ALL STREAM(S), SPRING(S), AND WELL(S), 25' FROM SLOPES >30%, & 10' FROM BUILDING FOUNDATIONS
6. SEPTIC TANK AND PUMP CHAMBER MUST BE AT LEAST 25' FROM ALL PROPERTY LINES WITHOUT SETBACK WAIVERS, 100 FEET FROM STREAM(S), SPRING(S), & WELL(S), 25' FROM SLOPES >30%, & 5' FROM BUILDING FOUNDATIONS
7. THIS OFFICE CURRENTLY HAS NOT REVIEWED CONSTRUCTION PLANS AS OF THE DATE OF THIS SEPTIC DESIGN.

Legend:

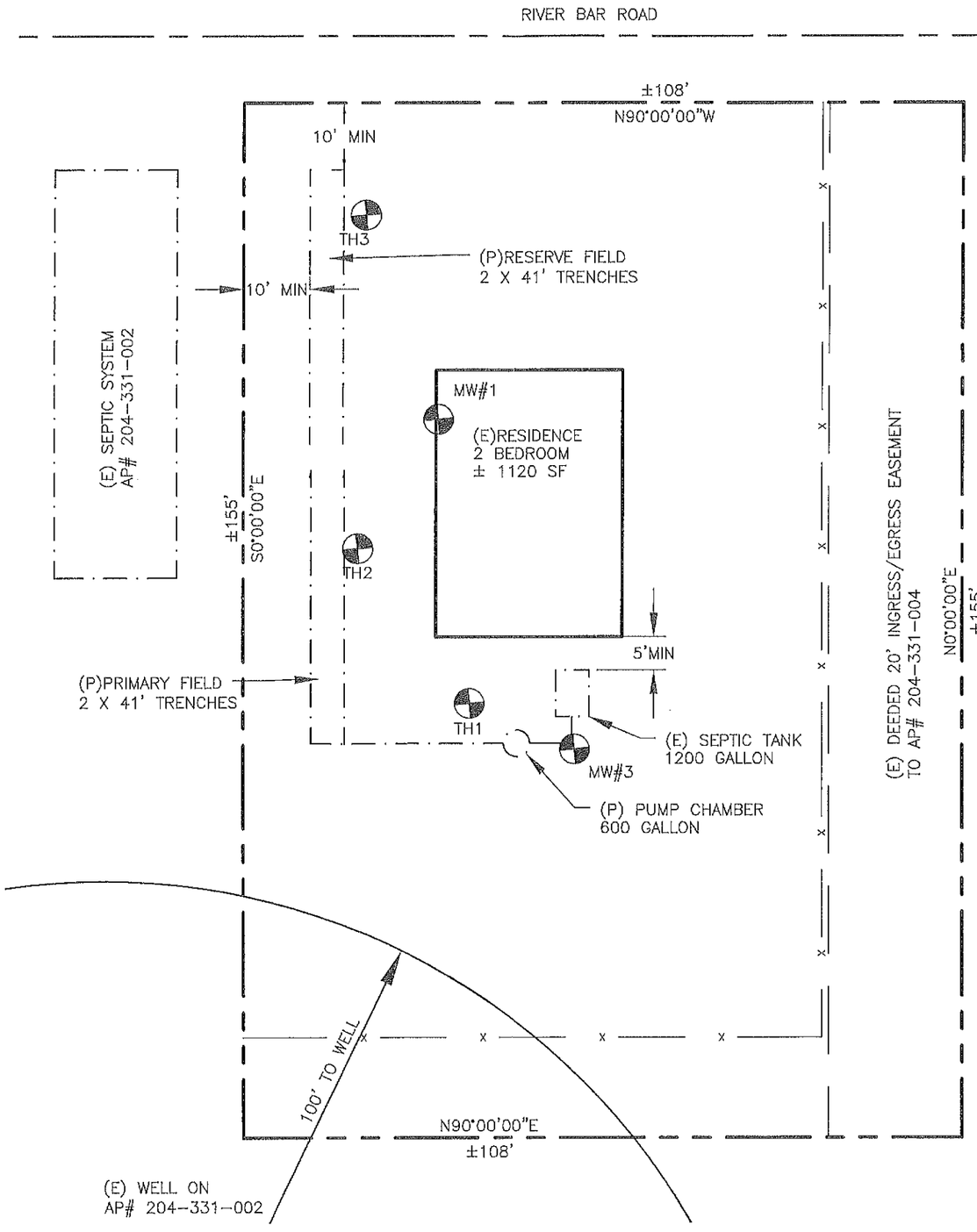
PROPERTY LINE	
EASEMENT SETBACK	
LEACH FIELD SETBACK	
FENCE LINE	x
TEST HOLE LOCATION	
PROPOSED	(P)
EXISTING	(E)

DIRECTIONS:

EXIT US–HWY 101 (EXIT 685) CA–HWY 36 EAST. TRAVEL ±1.7 MILES TO RIVER BAR ROAD ON RIGHT. PROCEED FOR ±1.3 MILES, DRIVEWAY TO PROPERTY ON RIGHT.



PROXIMITY MAP N.T.S.



SEPTIC SITE PLAN (DETAIL A)

SCALE 1"=20'
0 10 20 40

LEGAL

ADDRESS: RIVER BAR RD
HYDESVILLE, CA 95547

ASSESSOR'S PARCEL NUMBER:
204-331-003

OWNER: MIKE McENRY
ADDRESS: P.O. BOX 134
HYDESVILLE, CA 95547
PHONE: (707) 223-4899

SETBACK: 30' FRONT, 11' SIDE, 20' REAR

AREA ANALYSIS

LOT SIZE: 0.38 ACRES

DISCLAIMER:

MAPPING INFORMATION PROVIDED IS FOR SEPTIC DESIGN PURPOSES ONLY.

THIS SITE PLAN REFLECTS MANY MAPPING DETAILS THAT ARE USEFUL TO ASSURE THAT THE SEPTIC DESIGN IS LOCATED APPROPRIATE TO ITS SURROUNDINGS. HOWEVER, NONE OF THE INFORMATION SHOWN IS IMPLIED TO SUGGEST OR SUBSTITUTE FOR A CONTRACTED ACTUAL LAND SURVEY.

A. M. BAIRD, ENGINEERING AND SURVEYING, INC. ASSUMES NO RESPONSIBILITY ARISING FROM THE USE OF INFORMATION PROVIDED, OTHER THAN WHAT HAS BEEN SPECIFICALLY INTENDED FOR THE SEPTIC DESIGN.

NO.	DATE	DESCRIPTION
		REVISIONS

A.M.Baird
Engineering & Surveying, Inc.
1257 Main Street., P.O.Box 396,
Fortuna, CA 95540, (707) 725-5182

SCALE: 1" = 20'
DRAWN BY: MJN
CHKD: A.M.B.
DATE: 10/5/18

MIKE McENRY
RIVER BAR RD
FORTUNA, CA 95540
SINGLE FAMILY RESIDENCE

SEPTIC SITE PLAN

JOB # 18-4752

SHEET # 1 OF 1

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CONSULTING – LAND DEVELOPMENT – DESIGN – SURVEYING

SEPTIC DISPOSAL DESIGN

Low Pressure Pipe Distribution
2-Bedroom Residence

Primary and Reserve Field

PREPARED FOR

Mike McEnry

APN: 204-331-003
River Bar Road

FORTUNA, HUMBOLDT COUNTY, CA

PREPARED BY:

REGISTERED PROFESSIONAL ENGINEER
ALLAN M. BAIRD
No. 23681
Exp.
CIVIL
STATE OF CALIFORNIA

ALLAN M. BAIRD, RCE 23681

November 30, 2018
JN# 18-4752

November 30, 2018

Humboldt County Environmental Health Department
100 H Street, Suite 100
Eureka, CA 95501

SUBJECT: CLIENT: Mike McEnry
Design for an **LPP Distribution Septic System.**
APN: 204-331-003, Fortuna, CA.

INTRODUCTION

The following septic design report is being submitted for the above referenced property in Fortuna, CA. The following design is furnished to satisfy the requirements for an individual septic disposal system as required by the County of Humboldt. This office has not reviewed any specific construction plans for the residence.

The Department of Environmental Health has, on file, documentation for a property line setback reduction to accommodate the existing septic system on AP# 204-331-002 which is shown on the site plan accompanying this report. The granting of a setback reduction is inferred to be mutually applied, provided no other setbacks are infringed upon. Thus, the setback reduction has been incorporated into this design.

Whitchurch Engineering installed two monitoring wells (MW#1 and MW#2) prior to any analyses conducted on this lot by this office. An additional monitoring well (MW#3) was installed by this office in January 2008 due to issues with MW#2. Monitoring data has been included at the end of this report. Wet weather percolation testing and soils analyses were conducted by A.M. Baird Engineering & Surveying, Inc. in April 2008 and April 2018.

SITE AND SOILS DESCRIPTION

The total area of the parcel is 0.38 ± acres. Access to the parcel will be provided via an existing gravel driveway off River Bar Road. The lot has gradual slopes of 0-2%.

A total of 3 trenches were excavated by this office to depths of 3.5, 3, and 4 feet (TH#1, TH#2 and TH#3, respectively), where percolation data and soil samples were collected (locations shown on the site plan). Groundwater was established at 5.5 feet and 6 feet in MW#1 and MW#3, respectively (see attached monitoring data).

Laboratory texture analysis of the three samples collected by this office revealed Zone 2 Loam at TH#1 and TH#2, where TH#3 was found to be Zone 2 Sandy Loam. The soils at all test holes are suitable for leaching. Field percolation rates were tested by this office during the wet weather season at ±5 minutes per inch at all locations. The wet weather percolation rates and soil profiles are assumed to be representative of the entire designed leach area. See enclosed sheets for subsurface profile logs, texture analysis, and percolation rate data.

DESIGN RESULTS

A Low-Pressure Pipe Distribution System Design has been selected due to rapid percolation rates, high ground water and space constraints. The required length of pressurized lateral to treat the effluent for a 2-bedroom residence with 1-foot wide 2.5-foot-deep trenches, septic lines at a depth of 0.5-foot, 2.0-foot gravel depth below leach lines, and an application rate of 0.732 gpd/sf is 82 feet, at a minimum, for both the primary and reserve fields. The primary and reserve field designs each consist of two 41-foot lines.

Leach lines should be placed parallel to contour lines, shall be 5 feet away from adjacent leach lines and 10 feet away from structural foundations and property lines. Additionally, they cannot be placed under driveways and must be set back 25 feet from any slopes dropping over 30%. A 1200-gallon minimum capacity septic tank will be required for storage of waste, as well as a 600-gallon effluent pumping chamber. It is recommended that all surface water drainage from surrounding structures be diverted away from the location of the sewage disposal fields. Enclosed are the following items:

- A design evaluation summary / calculations
- Material List
- Design Specification Summary
- Site & location maps with disposal field locations
- Subsurface profile logs
- Soil texture sheets for TH#1-3
- Percolation data
- Precipitation and monitoring data
- Typical trench cross-section
- Minimum setbacks for septic tanks and disposal fields

Please feel free to contact this office should any questions arise concerning this report (707) 725-5182.

Sincerely,

Allan M. Baird
Principal Engineer

SITE EVALUATION REPORT
INDIVIDUAL SEWAGE DISPOSAL SYSTEMS DESIGN

DATE: 11/30/18
AP#: 204-331-003
WATER SUPPLY: Private
SITE ADDRESS: River Bar Road
CITY: Fortuna, CA 95540

OWNER: Mike McEnry
CLIENT: Mike McEnry
MAIL: P.O. Box 134
CITY: Hydesville, CA 95547
PHONE NUMBER: 707-223-4899

SINGLE FAMILY RESIDENCE / NO. OF BEDROOMS (N): **2 (300 GPD)**

	PRIMARY FIELD		RESERVE FIELD
LOCATION:	TH#2		TH#3
SLOPE:	0-2%		0-2%
DEPTH:	3 Feet		4 Feet
TEXTURE ZONE:	Zone 2		Zone 2
USDA CLASS:	Loam		Sandy Loam
STABILIZATION RATE:	***5 min/inch***	***CONTROL***	***5 min/inch***

DEPTH TO WATER TABLE: 5.5 feet-6 feet based on monitoring well data

STANDARD INFILTRATOR CHAMBER SYSTEM

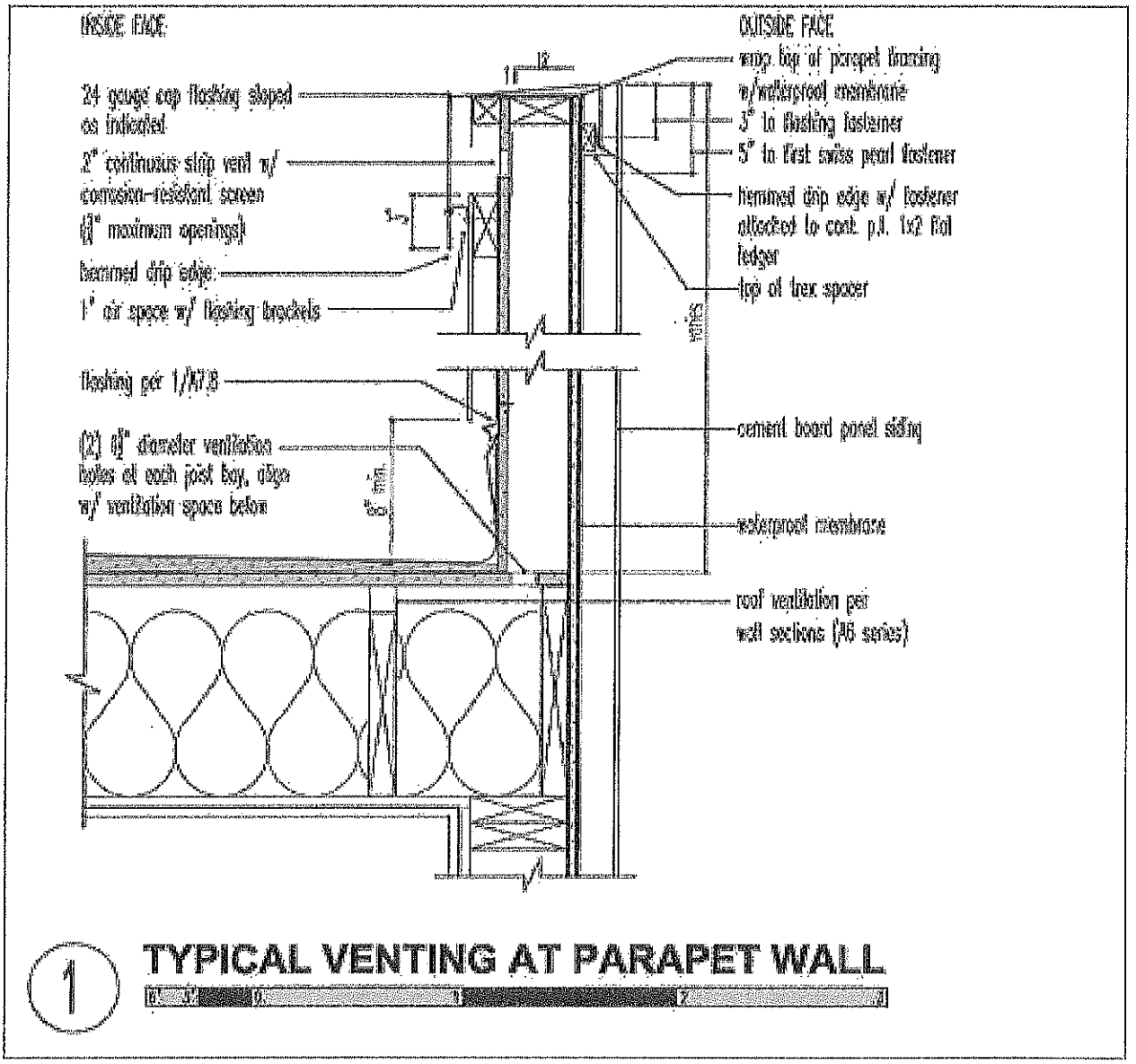
DEPTH OF LATERALS:	0.5 ft
TRENCH PERIMETER (P):	5 ft (2' sides, 1' bottom)
APPLICATION RATE (AR):	0.732 gpd/linear foot

Primary LINEAR FT. OF SYSTEM: Flow/ AR/ P = 300/ 0.732/ 5 = ***82 feet***
Reserve LINEAR FT. OF SYSTEM: Flow/ AR/ P = 300/ 0.732/ 5 = ***82 feet***

DESIGN SUMMARY:

Two 41-foot trenches: Primary Field
Two 41-foot trenches: Reserve Field

BASED ON TESTING RESULTS USING APPROVED PROCEDURES, THE ABOVE SAID PROPERTY COMPLIES WITH ALL STATE AND COUNTY REQUIREMENTS FOR AN ON-SITE SEPTIC SYSTEM.



1 TYPICAL VENTING AT PARAPET WALL

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CONSULTING – LAND DEVELOPMENT – DESIGN – SURVEYING

CALCULATIONS

*based on Cogger, et.al., 1982

Waste Flow	300 gpd	Supply Line	50 ft
Loading Rate	0.732 gpd/ft^2	Absorbtion Area	5 ft^2/ft

LAYOUT

Determine Absorption Area (A):

A= Waste Flow / Loading Rate

A= 410 sq. ft

Determine the Total Lateral Length (L):

L= Area /Absorbtion Area

L= 81.97 ft

Shape of Field

Line length	41 ft lines
# of Lines	2

DOSING AND DISTRIBUTION

Pressure Distribution Network:

Perforation size=	5/32 in	
Perforation spacing=	48 in	
no. of holes =	10 holes/line	
total # of holes=	20 holes	
Flow Rate per Hole=	0.50 gpm	(Table 2.)
Flow Rate per Line=	5.00 gpm	
Total Flow Rate=	10 gpm	
Siphon-Breaker Needed?	NO , if YES, add 2 gpm to Total	
Total Flow Rate=	10 gpm	

Total Head=elevation head+pressure head+friction head

Elevation Head=	3 ft
Pressure Head=	3 ft
Friction Head= 1.2 x pipe friction	
Pipe Loss/100 ft of pipe	0.62 (Table 3.)
Pipe Friction	0.31
Friction Head=	0.37
Total Head	6.37

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CONSULTING – LAND DEVELOPMENT – DESIGN – SURVEYING

CALCULATIONS

DOSING VOLUME

Minimum Dosing Volume = Vol. Of Supply Line + 5 * Vol. Laterals
(Schedule 40 PVC)

Supply Line Length	50 ft
Volume of Supply Line/100 ft :	16.2 (Table 4.)
Volume of Supply Line=	8.1 gal
Volume of Laterals/100 ft=	6.4 (Table 4.)
Volume of Laterals=	5.2 gal
Minimum Dosing Volume=	34.3 gal

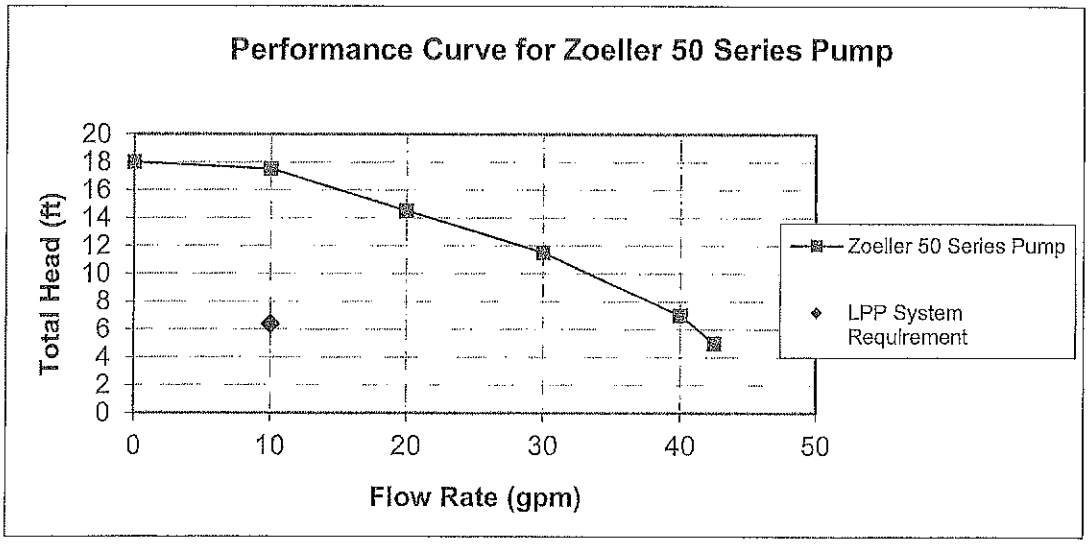
Dosing 2-4 x/day provides adequate resting time. For 300 gal/day, use75-150 gal/dose.
Selected Dosing Volume 75 gal

Dosing Depth=Volume Dose/Volume of Tank x Liquid depth of tank 0.5 ft
6 inches

Check Valve needed if Volume storage > 1/4 waste flow
Storage V 13.3459016
1/4 (Waste) 75 No Check Valve Needed
Check Valve recommended on all systems, regardless

PUMP SELECTION

The system will require a pump with 10 gallons/minute with 6.37 feet of head.



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CONSULTING – LAND DEVELOPMENT – DESIGN – SURVEYING

DESIGN SPECIFICATIONS SUMMARY FOR LOW PRESSURE DISTRIBUTION SYSTEM

River Bar Road, Fortuna, CA. APN: 204-331-003

Daily Waste Flow	300 gal
Septic Tank Size	1200 gal
Pumping Tank Size	600 gal (twice daily waste flow)
Effluent Loading Rate	0.732 gal/ft^2/day
Absorption Area	410 sq ft
Total Length of Laterals	41 ft
Lateral Depth	6 inches
Lateral Spacing	5 ft
Lateral diameter	1 ¼ in.
Lateral Configuration	2 x 41 ft lines
Supply Line Length	50 feet
Supply Line Diameter	2 in. Schedule 40
Manifold Placement	end
Hole Size	5/32 in
Hole spacing	48"
Number of Holes Per Lateral	10
Pressure Head	6.37 ft
Flow per Hole	0.50 gpm
Total Flow	10 gpm
Elevation Head	3 ft
Friction Head	0.37 ft
Pressure Head	3 ft
Total Head	6.37 ft
Pump Requirements	10 gpm @ 6.37 ft of head
Storage Volume in Laterals	5.2 gallons
Storage Volume in Supply Line	8.1 gallons
Total Storage Volume	13.3gallons
Dosing Volume	32-75 gallons
Dosing Depth	3-6 in. (to be verified in field)
Check Valve Needed?	NO, but advised
¼ inch siphon breaker needed?	YES

*Contractor to verify all field measurements

PTN SEC 29 2N 1E

(BEING A DETAIL OF PAGE 10)

204-33

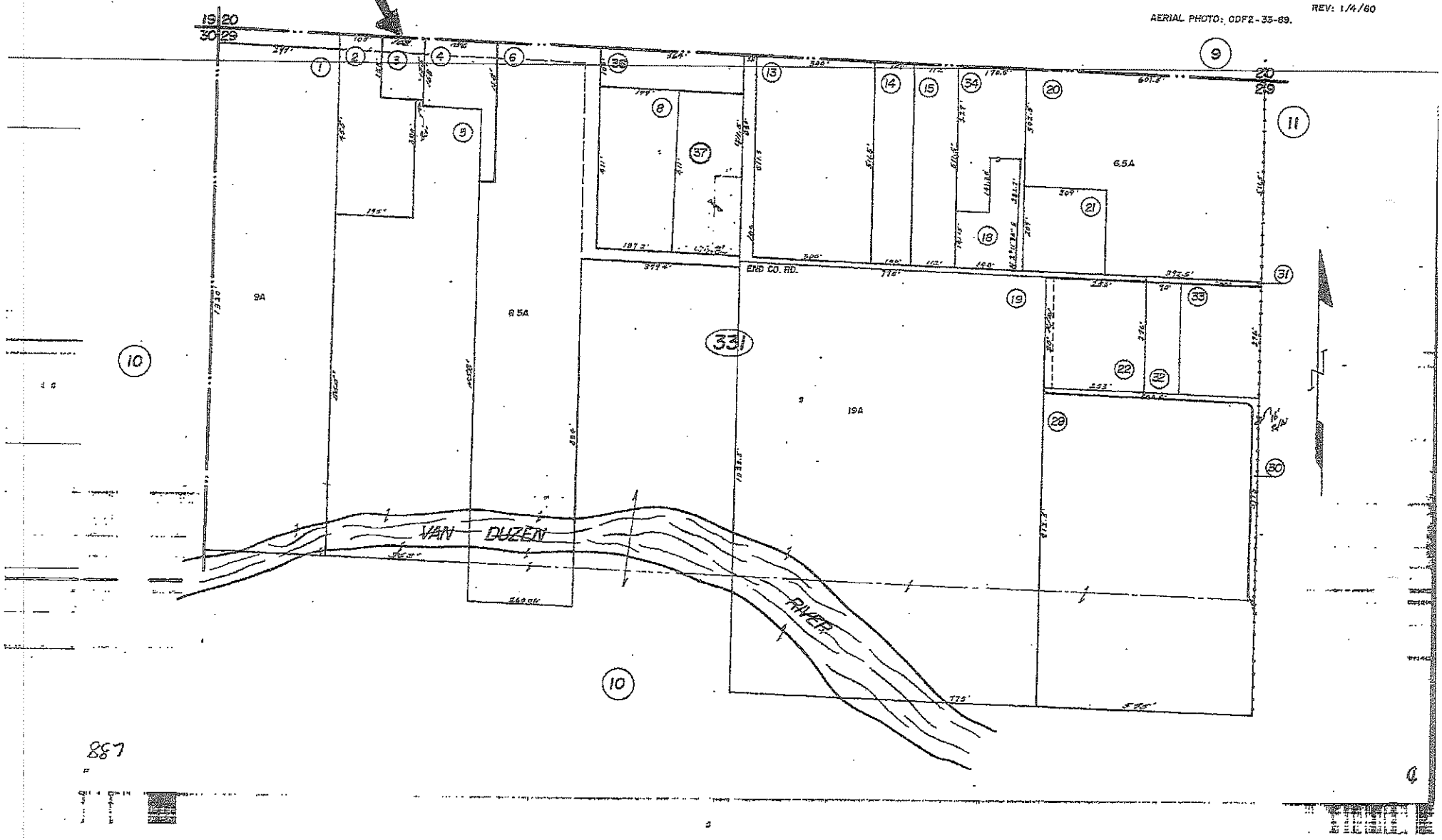
T.C.A. 100-05

1" = 200'

REV: 1/4/60

AERIAL PHOTO: CDF2-33-89.

AP 204-33



Project:	**KENNEY**	Logged by:	asb	Jn#	07-3819
Hole #:	**1 & 2**	Date:	4/7/08	Excavation:	Backhoe

SUBSURFACE PROFILE LOGS

	Description & Remarks	Depth (ft)	Sample	Classification
0-2.5 ft	Munsell color 10 YR 3/1 very dark grey Gravelly (15-35%) past 4" Weak subangular blocky structure Roots- common fine shallow Consistence: moist- loose, wet- slightly sticky, slightly plastic	- 1 - - 2 -		
2.5-4 ft	Gradual boundry (2.5-5") Munsell color 10 YR 3/2 very dark greyish brown Very gravelly (35-65%) Weak granular structure Roots- none Consistence: moist- very friable wet- not sticky, not plastic	- 3 - - 4 -	B A	**ZONE 2 LOAM**
	NO MOTTLING NO GROUNDWATER OBSERVED End of excavation	- 5 - - 6 - - 7 - - 8 - - 9 - - 10 - - 11 -		

PROFILES LOGS SHOW SUBSURFACE CONDITIONS BY OBSERVATIONS AT THE DATES AND LOCATIONS INDICATED AND IT IS NOT WARRANTED THAT THEY ARE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

Project:	**McENRY**	Logged by:	MJN	Jn#	18-4752
Hole #:	**3**	Date:	3/29/18	Excavation:	Auger

SUBSURFACE PROFILE LOGS

	Description & Remarks	Depth (ft)	Sample	Classification
0-2 ft	Munsell color 10 YR 3/1 very dark grey Gravelly (15-35%) past 4" Weak subangular blocky structure Roots- common fine shallow Consistence: moist- loose, wet- slightly sticky, slightly plastic	- 1 -		
2-4 ft	Gradual boundry (2.5-5") Munsell color 10 YR 3/2 very dark greyish brown Very gravelly (<65%) Weak granular structure Roots- none Consistence: moist- very friable wet- not sticky, not plastic	- 2 - - 3 - - 4 -		**ZONE 2 SANDY LOAM**
	NO MOTTLING NO GROUNDWATER OBSERVED End of excavation	- 5 - - 6 - - 7 - - 8 - - 9 - - 10 - - 11 -		

PROFILES LOGS SHOW SUBSURFACE CONDITIONS BY OBSERVATIONS AT THE DATES AND LOCATIONS INDICATED AND IT IS NOT WARRANTED THAT THEY ARE REPRESENTATIVE OF SUBSURFACE CONDITIONS AT OTHER LOCATIONS AND TIMES.

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CONSULTING – LAND DEVELOPMENT – DESIGN – SURVEYING

WORKSHEET FOR SOIL TEXTURE

Project: Kenney

by: ASB

AP#: 204-331-003

Lab Test Date: 4/7/2008

1	**1**	SAMPLE NUMBER
1	2	TEST HOLE
3 1/2	3	Depth (ft)
803	818.6	TOTAL SAMPLE WEIGHT (gm)
45.5	186.1	Coarse Weight (gm)
75	75	A. Ovendry Weight (gm)
9:44	9:45	B. Starting Time (hr:min:sec)
67	67	C. Temp @ 40 sec. (°F)
46	52	D. Hydrometer Reading @ 40 sec. (gm/l)
-6.7	-6.7	E. Composite Correction (gm/l)
39.3	45.3	F. True Density @ 40sec. (gm/l), (D-E)
70	70	G. Temp @ 2 hrs. (°F)
15	16	H. Hydrometer Reading @ 2hrs. (gm/l)
-6.1	-6.1	I. Composite Correction (gm/l)
8.9	9.9	J. True Density @ 2 hrs. (gm/l), (H-I)
47.6	**39.6**	K. % Sand = 100 -[(F/A) x 100]
11.9	**13.2**	L. % Clay = (J/A) x 100
40.5	**47.2**	M. % Silt = 100 - (K +L)
LOAM	**LOAM**	N. USDA Texture
2	**2**	O. Soil Percolation Suitability Chart Zone
52.4	**60.4**	P. Combined % Silt and Clay
5.7	22.7	Q. Coarse % by weight
0.7	2.8	R. % Coarse Adjustment*

* [(.2)(.00003Q^3+.0006Q^2+.5968Q-.0941)]

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CONSULTING – LAND DEVELOPMENT – DESIGN – SURVEYING

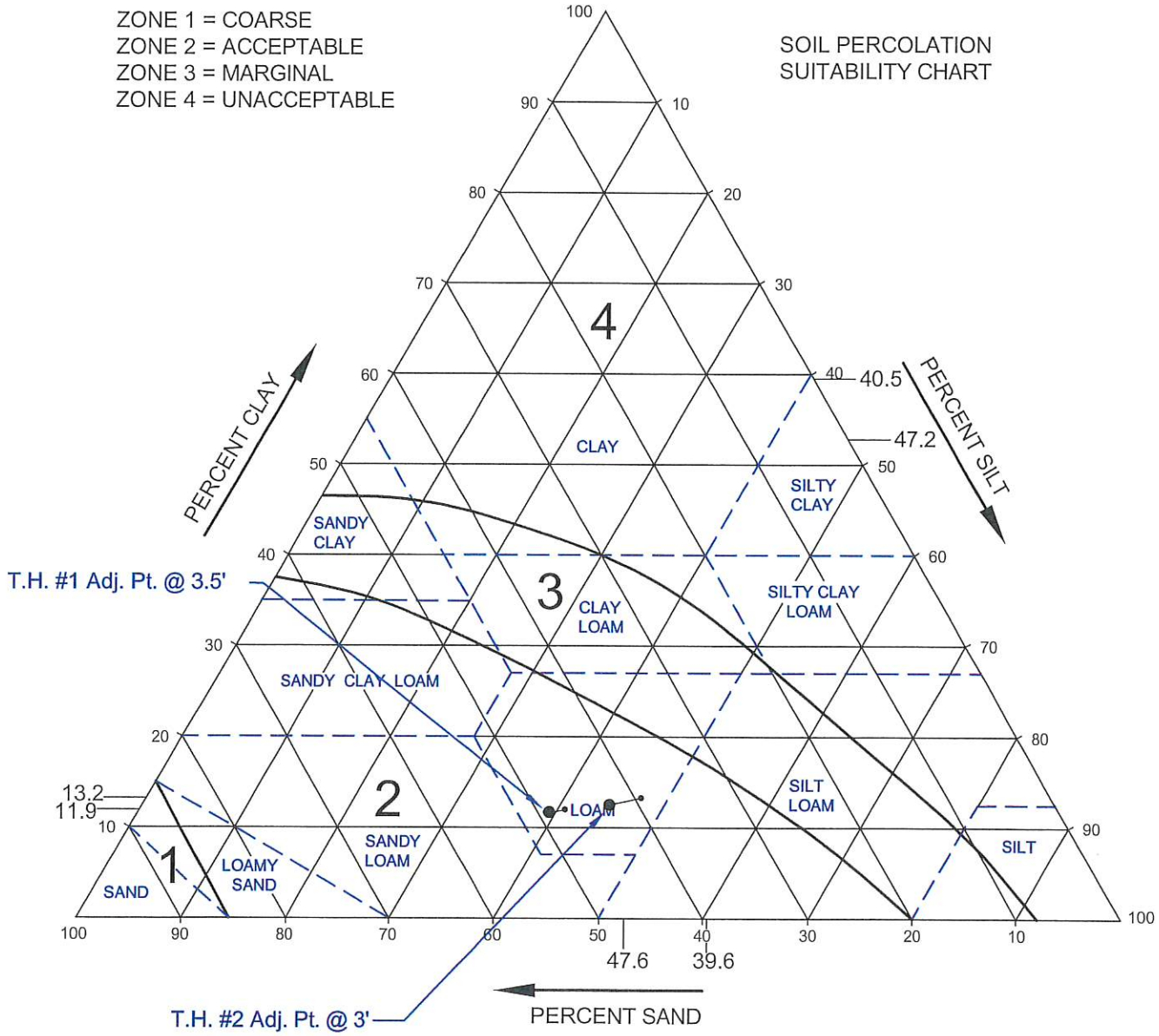
CLIENT: KENNEY

DATE: 4/7/08

APN: 204-331-003

ZONE 1 = COARSE
ZONE 2 = ACCEPTABLE
ZONE 3 = MARGINAL
ZONE 4 = UNACCEPTABLE

SOIL PERCOLATION
SUITABILITY CHART



1. COARSE ADJUSTMENT: T.H. #1 @ 3.5' = 0.7%; T.H. #2 @ 3' = 2.8%

2. BULK-DENSITY ADJUSTMENT: NOT TESTED

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CONSULTING – LAND DEVELOPMENT – DESIGN – SURVEYING

Project: McEnry
AP#: 204-331-003

by: PDS
Lab Test Date: 3/29/2018

1	SAMPLE NUMBER
TH3	TEST HOLE
4	Depth (ft)
889	TOTAL SAMPLE WEIGHT (gm)
125	Coarse Weight (gm)
75	A. Ovendry Weight (gm)
10:38	B. Starting Time (hr:min:sec)
58	C. Temp @ 40 sec. (°F)
33	D. Hydrometer Reading @ 40 sec. (gm/l)
-8.5	E. Composite Correction (gm/l)
24.5	F. True Density @ 40sec. (gm/l), (D-E)
62	G. Temp @ 2 hrs. (°F)
16	H. Hydrometer Reading @ 2hrs. (gm/l)
-7.7	I. Composite Correction (gm/l)
8.3	J. True Density @ 2 hrs. (gm/l), (H-I)
67.3	K. % Sand = 100 -[(F/A) x 100]
11.1	L. % Clay = (J/A) x 100
21.6	M. % Silt = 100 - (K +L)
SNDY LOAM	N. USDA Texture
2	O. Soil Percolation Suitability Chart Zone
32.7	P. Combined % Silt and Clay
14.1	Q. Coarse % by weight
1.7	R. % Coarse Adjustment*

* [(.2)(.00003Q^3+.0006Q^2+.5968Q-.0941)]

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CONSULTING – LAND DEVELOPMENT – DESIGN – SURVEYING

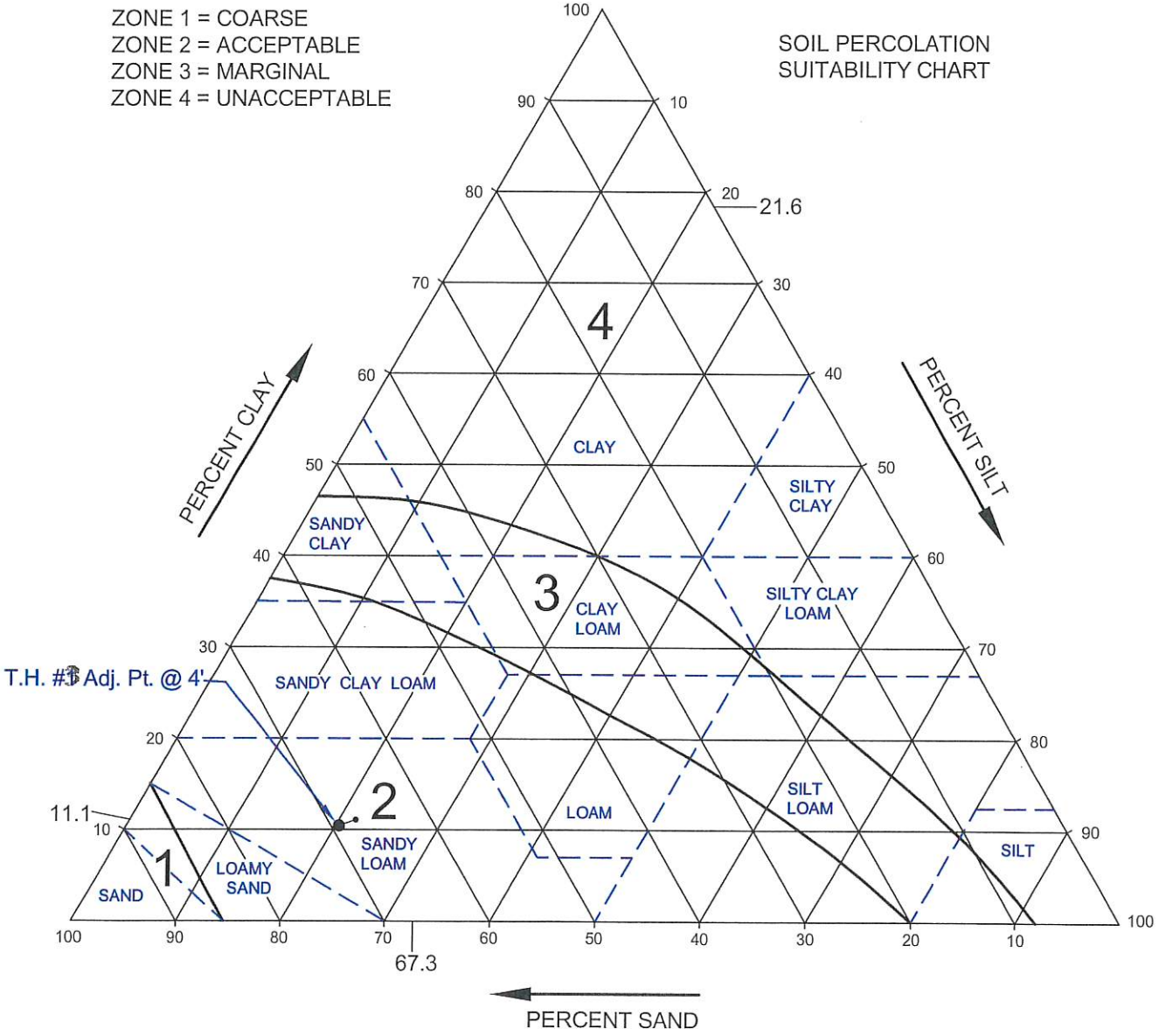
CLIENT: McENRY

DATE: 4/4/18

APN: 204-331-003

ZONE 1 = COARSE
ZONE 2 = ACCEPTABLE
ZONE 3 = MARGINAL
ZONE 4 = UNACCEPTABLE

SOIL PERCOLATION
SUITABILITY CHART



1. COARSE ADJUSTMENT: T.H. #3 @ 4' = 1.7%

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CONSULTING – LAND DEVELOPMENT – DESIGN – SURVEYING

Test Hole	#1
Water Table	>5 ft
Soil Type	Loam
Presoak	wet weather
Depth	3.5

Percolation Test Data
Project: **Kenney**
APN# 204-331-003
Test Date: 3/28/2008

Test #	Time	Fill (in)	Meas. (in)	Min.	Drop (in)	Rate (min/inch)
1	10:39	10				
	10:49		8	0:10	2	**5.0**
2	10:49	10				
	10:59		8	0:10	2	**5.0**
3	10:59	10				
	11:09		8 1/8	0:10	1 7/8	**5.3**
4	11:09	10				
	11:19		8	0:10	2	**5.0**
5	11:19	10				
	11:29		8 1/8	0:10	1 7/8	**5.3**

STABILIZED RATE FOR DESIGN = 5 MIN/INCH

Test Hole	#2
Water Table	>5 ft
Soil Type	Loam
Presoak	wet weather
Depth	3 ft

Test #	Time	Fill (in)	Meas. (in)	Min.	Drop (in)	Rate (min/inch)
1	10:38	10				
	10:48		7 7/8	0:10	2 1/8	**4.7**
2	10:48	10				
	10:58		7 7/8	0:10	2 1/8	**4.7**
3	10:58	10				
	11:08		8	0:10	2	**5.0**
4	11:08	10				
	11:18		8 1/8	0:10	1 7/8	**5.3**
5	11:18	10				
	11:28		8	0:10	2	**5.0**

STABILIZED RATE FOR DESIGN = 5 MIN/INCH

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CONSULTING – LAND DEVELOPMENT – DESIGN – SURVEYING

Test Hole	TH3
Water Table	>5 ft
Soil Type	Sandy Loam
Presoak	wet weather
Depth	4

Percolation Test Data
Project: McEnry
APN# 204-331-003
Test Date: 3/29/2018

Test #	Time	Fill (in)	Meas. (in)	Min.	Drop (in)	Rate (min/inch)
1	12:15	14				
	12:25		11 7/8	0:10	2 1/8	**4.7**
2	12:26	14				
	12:36		12	0:10	2	**5.0**
3	12:37	14				
	12:47		12	0:10	2	**5.0**
4	12:48	14				
	12:58		12	0:10	2	**5.0**

STABILIZED RATE FOR DESIGN = 5 MIN/INCH

OBSERVATION WELL LOG

Job Number 07-3819

Project Jason Kenney

AP # 204-331-003

Test Hole # MW # 1 (Installed by Whitchurch Engineering, Inc.)

Elevation of Rim ~0.5 ft above ground surface

Depth of Well 16 ft.

Date	Time	Depth to Water Surface (from ground surface to)	Total Rainfall To Date	Rainfall Past 24 Hours*	Comments
1/27/08	4:00pm	Ø (>16ft)	23.40"	1.42"	Significant rain event of 1.42" in 24hrs on 1/27/08
1/29/08	5:30pm	5.58ft	24.15"	0.57"	Significant rain event of 0.57" in 24hrs on 1/29/08
2/1/08	3:30pm	5.41 ft.	26.10"	0.20"	
2/3/08	4:00pm	5.33 ft.	27.13"	0.19"	
2/6/08	5:00pm	5.45 ft.	27.18"	0.00"	
2/9/08	3:00pm	5.65 ft.	27.20"	0.00"	
2/12/08	4:30pm	5.83 ft.	27.20"	0.00"	
2/15/08	3:30pm	5.83 ft.	27.20"	0.00"	
2/18/08	4:00pm	5.88 ft	27.22"	0.02"	

* Data from Weather Bureau – (707) 443-7062 (Eureka measurements)

** Please attach site plan showing locations of observation wells

OBSERVATION WELL LOG

Job Number 07-3819

Project Jason Kenney

AP # 204-331-003

Test Hole # mw#3 (Installed by A.M. Baird Engineering & Surveying, Inc).

Elevation of Rim 0.5 ft above ground surface

Depth of Well 5.75 ft

Date	Time	Depth to Water Surface (from ground surface to)	Total Rainfall To Date	Rainfall Past 24 Hours*	Comments
1/27/08	4:00pm	5.67 ft	23.40"	1.42"	
1/29/08	5:30pm	5.58 ft	24.15"	0.57"	
2/1/08	3:30pm	5.58 ft.	26.10"	0.20"	
2/3/08	4:00pm	5.67 ft	27.13"	0.19"	
2/6/08	5:00pm	5.67 ft.	27.18"	0.00"	
2/9/08	3:00pm	5.67 ft.	27.20"	0.00"	
2/12/08	4:30pm	5.67 ft.	27.20"	0.00"	
2/15/08	3:30 pm	5.67 ft	27.20"	0.00"	
2/18/08	4:00pm	5.69 ft	27.22"	0.02"	

* Data from Weather Bureau – (707) 443-7062 (Eureka measurements)

** Please attach site plan showing locations of observation wells

Please note this information is preliminary and subject to revision. Official and certified climatic data can be accessed at the National Climatic Data Center (NCDC) (http://www.ncdc.noaa.gov/oa/ncdc.html).

Climate Report

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CDUS46 KEKA 280818
CLIEKA

CLIMATE REPORT
NATIONAL WEATHER SERVICE EUREKA CA
1213 AM PST MON JAN 28 2008

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...THE EUREKA CLIMATE SUMMARY FOR JANUARY 27 2008...

CLIMATE NORMAL PERIOD 1971 TO 2000
CLIMATE RECORD PERIOD 1886 TO 2008
```

WEATHER ITEM	OBSERVED VALUE	TIME (LST)	RECORD VALUE	YEAR	NORMAL VALUE	DEPARTURE FROM NORMAL	LAST YEAR
TEMPERATURE (F)							
YESTERDAY							
MAXIMUM	48	MM	73	1940	55	-7	48
MINIMUM	34	MM	28	1957	41	-7	42
AVERAGE	41				48	-7	45
PRECIPITATION (IN)							
YESTERDAY	1.42		1.88	1967	0.19	1.23	0.00
MONTH TO DATE	7.20				5.20	2.00	1.85
SINCE JUL 1	23.40				21.09	2.31	17.06
SINCE JAN 1	7.20				5.20	2.00	1.85
SNOWFALL (IN)							
YESTERDAY	T	R	0.0	2002	0.0	0.0	0.0
MONTH TO DATE	T				T	0.0	T
SINCE DEC 1	T				T	0.0	T
SINCE JUL 1	T				T	0.0	T
SNOW DEPTH	0						
DEGREE DAYS							
HEATING							
YESTERDAY	24				17	7	20

Significant rain event

Please note this information is preliminary and subject to revision. Official and certified climatic data can be accessed at the National Climatic Data Center (NCDC) (http://www.ncdc.noaa.gov/oa/ncdc.html).

Climate Report

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CDUS46 KEKA 300816
CLIEKA

CLIMATE REPORT
NATIONAL WEATHER SERVICE EUREKA CA
1211 AM PST WED JAN 30 2008

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...THE EUREKA CLIMATE SUMMARY FOR JANUARY 29 2008...

CLIMATE NORMAL PERIOD 1971 TO 2000
CLIMATE RECORD PERIOD 1886 TO 2008
```

WEATHER ITEM	OBSERVED VALUE	TIME (LST)	RECORD VALUE	YEAR	NORMAL VALUE	DEPARTURE FROM NORMAL	LAST YEAR
TEMPERATURE (F)							
YESTERDAY							
MAXIMUM	48	MM	70	1935	55	-7	50
MINIMUM	39	MM	26	2002	41	-2	38
AVERAGE	44				48	-4	44
PRECIPITATION (IN)							
YESTERDAY	0.57		1.81	1890	0.19	0.38	0.00
MONTH TO DATE	7.95				5.58	2.37	1.85
SINCE JUL 1	24.15				21.47	2.68	17.06
SINCE JAN 1	7.95				5.58	2.37	1.85
SNOWFALL (IN)							
YESTERDAY	MM		0.0	2002	T	MM	0.0
MONTH TO DATE	T				T	0.0	T
SINCE DEC 1	T				T	0.0	T
SINCE JUL 1	T				T	0.0	T
SNOW DEPTH	0						
DEGREE DAYS							
HEATING							

significant rain event

Please note this information is preliminary and subject to revision. Official and certified climatic data can be accessed at the National Climatic Data Center (NCDC) (http://www.ncdc.noaa.gov/oa/ncdc.html).

Climate Report

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CDUS46 KEKA 020827
CLIEKA

CLIMATE REPORT
NATIONAL WEATHER SERVICE EUREKA CA
1215 AM PST SAT FEB 2 2008


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...THE EUREKA CLIMATE SUMMARY FOR FEBRUARY 1 2008...

CLIMATE NORMAL PERIOD 1971 TO 2000
CLIMATE RECORD PERIOD 1886 TO 2008
```

WEATHER ITEM	OBSERVED VALUE	TIME (LST)	RECORD VALUE	YEAR	NORMAL VALUE	DEPARTURE FROM NORMAL	LAST YEAR
TEMPERATURE (F)							
YESTERDAY							
MAXIMUM	49	MM	71	1958	55	-6	49
MINIMUM	40	MM	27	1950	41	-1	44
AVERAGE	45				48	-3	47
PRECIPITATION (IN)							
YESTERDAY	0.20		4.45	1915	0.19	0.01	0.00
MONTH TO DATE	0.20				0.19	0.01	0.00
SINCE JUL 1	26.10				22.05	4.05	17.07
SINCE JAN 1	9.90				6.16	3.74	1.86
SNOWFALL (IN)							
YESTERDAY	MM		0.0	2002	0.1	MM	0.0
MONTH TO DATE	MM				0.1	MM	0.0
SINCE DEC 1	T				0.3	-0.3	T
SINCE JUL 1	T				0.3	-0.3	T
SNOW DEPTH	0						
DEGREE DAYS							
HEATING							

Please note this information is preliminary and subject to revision. Official and certified climatic data can be accessed at the National Climatic Data Center (NCDC) (http://www.ncdc.noaa.gov/oa/ncdc.html).

Climate Report

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CDUS46 KEKA 040827
CLIEKA

CLIMATE REPORT
NATIONAL WEATHER SERVICE EUREKA CA
1223 AM PST MON FEB 4 2008


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...THE EUREKA CLIMATE SUMMARY FOR FEBRUARY 3 2008...

CLIMATE NORMAL PERIOD 1971 TO 2000
CLIMATE RECORD PERIOD 1886 TO 2008
```

WEATHER ITEM	OBSERVED VALUE	TIME (LST)	RECORD VALUE	YEAR	NORMAL VALUE	DEPARTURE FROM NORMAL	LAST YEAR
TEMPERATURE (F)							
YESTERDAY							
MAXIMUM	50	MM	73	2000	55	-5	55
MINIMUM	40	MM	30	1979	41	-1	40
AVERAGE	45				48	-3	48
PRECIPITATION (IN)							
YESTERDAY	0.19		4.81	1890	0.19	0.00	0.00
MONTH TO DATE	1.23				0.57	0.66	0.00
SINCE JUL 1	27.13				22.43	4.70	17.07
SINCE JAN 1	10.93				6.54	4.39	1.86
SNOWFALL (IN)							
YESTERDAY	MM		0.0	2002	T	MM	0.0
MONTH TO DATE	MM				0.2	MM	0.0
SINCE DEC 1	T				0.4	-0.4	T
SINCE JUL 1	T				0.4	-0.4	T
SNOW DEPTH	0						
DEGREE DAYS							
HEATING							

Please note this information is preliminary and subject to revision. Official and certified climatic data can be accessed at the National Climatic Data Center (NCDC) (http://www.ncdc.noaa.gov/oa/ncdc.html).

Climate Report

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CDUS46 KEKA 070816
CLIEKA

CLIMATE REPORT
NATIONAL WEATHER SERVICE EUREKA CA
1211 AM PST THU FEB 7 2008


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...THE EUREKA CLIMATE SUMMARY FOR FEBRUARY 6 2008...

CLIMATE NORMAL PERIOD 1971 TO 2000
CLIMATE RECORD PERIOD 1886 TO 2008
```

WEATHER ITEM	OBSERVED VALUE	TIME (LST)	RECORD VALUE	YEAR	NORMAL VALUE	DEPARTURE FROM NORMAL	LAST YEAR
TEMPERATURE (F)							
YESTERDAY							
MAXIMUM	52	MM	69	1987	56	-4	67
MINIMUM	40	MM	27	1989	41	-1	46
AVERAGE	46				49	-3	57
PRECIPITATION (IN)							
YESTERDAY	0.00		1.82	1960	0.19	-0.19	0.00
MONTH TO DATE	1.28				1.14	0.14	0.00
SINCE JUL 1	27.18				23.00	4.18	17.07
SINCE JAN 1	10.98				7.11	3.87	1.86
SNOWFALL (IN)							
YESTERDAY	0.0		0.0	2002	0.0	0.0	0.0
MONTH TO DATE	0.0				0.2	-0.2	0.0
SINCE DEC 1	T				0.4	-0.4	T
SINCE JUL 1	T				0.4	-0.4	T
SNOW DEPTH	0						
DEGREE DAYS							
HEATING							

Please note this information is preliminary and subject to revision. Official and certified climatic data can be accessed at the National Climatic Data Center (NCDC) (http://www.ncdc.noaa.gov/oa/ncdc.html).

Climate Report

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CDUS46 KEKA 100813
CLIEKA

CLIMATE REPORT
NATIONAL WEATHER SERVICE EUREKA CA
1209 AM PST SUN FEB 10 2008


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...THE EUREKA CLIMATE SUMMARY FOR FEBRUARY 9 2008...

CLIMATE NORMAL PERIOD 1971 TO 2000
CLIMATE RECORD PERIOD 1886 TO 2008
```

WEATHER ITEM	OBSERVED VALUE	TIME (LST)	RECORD VALUE	YEAR	NORMAL VALUE	DEPARTURE FROM NORMAL	LAST YEAR
TEMPERATURE (F)							
YESTERDAY							
MAXIMUM	55	MM	70	1928	56	-1	62
MINIMUM	37	300 AM	28	1923 1887	42	-5	44
AVERAGE	46				49	-3	53
PRECIPITATION (IN)							
YESTERDAY	0.00		3.61	1902	0.19	-0.19	0.05
MONTH TO DATE	1.30				1.71	-0.41	1.58
SINCE JUL 1	27.20				23.57	3.63	18.65
SINCE JAN 1	11.00				7.68	3.32	3.44
SNOWFALL (IN)							
YESTERDAY	0.0		0.0	2002	0.0	0.0	0.0
MONTH TO DATE	0.0				0.2	-0.2	0.0
SINCE DEC 1	T				0.4	-0.4	T
SINCE JUL 1	T				0.4	-0.4	T
SNOW DEPTH	0						

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DEGREE DAYS
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Please note this information is preliminary and subject to revision. Official and certified climatic data can be accessed at the National Climatic Data Center (NCDC) (http://www.ncdc.noaa.gov/oa/ncdc.html).

Climate Report

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CDUS46 KEKA 130812
CLIEKA

CLIMATE REPORT
NATIONAL WEATHER SERVICE EUREKA CA
1209 AM PST WED FEB 13 2008

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...THE EUREKA CLIMATE SUMMARY FOR FEBRUARY 12 2008...

CLIMATE NORMAL PERIOD 1971 TO 2000
CLIMATE RECORD PERIOD 1886 TO 2008
```

WEATHER ITEM	OBSERVED VALUE	TIME (LST)	RECORD VALUE	YEAR	NORMAL VALUE	DEPARTURE FROM NORMAL	LAST YEAR
TEMPERATURE (F)							
YESTERDAY							
MAXIMUM	51	MM	72	1971	56	-5	52
MINIMUM	44	MM	29	2001 1949	42	2	46
AVERAGE	48				49	-1	49
PRECIPITATION (IN)							
YESTERDAY	T		1.77	1895	0.20	-0.20	0.23
MONTH TO DATE	1.30				2.31	-1.01	3.36
SINCE JUL 1	27.20				24.17	3.03	20.43
SINCE JAN 1	11.00				8.28	2.72	5.22
SNOWFALL (IN)							
YESTERDAY	0.0		0.0	2002	0.0	0.0	0.0
MONTH TO DATE	0.0				0.2	-0.2	0.0
SINCE DEC 1	T				0.4	-0.4	T
SINCE JUL 1	T				0.4	-0.4	T
SNOW DEPTH	0						
DEGREE DAYS							
HEATING							

Please note this information is preliminary and subject to revision. Official and certified climatic data can be accessed at the National Climatic Data Center (NCDC) (http://www.ncdc.noaa.gov/oa/ncdc.html).

Climate Report

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CDUS46 KEKA 160825
CLIEKA

CLIMATE REPORT
NATIONAL WEATHER SERVICE EUREKA CA
1221 AM PST SAT FEB 16 2008


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...THE EUREKA CLIMATE SUMMARY FOR FEBRUARY 15 2008...

CLIMATE NORMAL PERIOD 1971 TO 2000
CLIMATE RECORD PERIOD 1886 TO 2008
```

WEATHER ITEM	OBSERVED VALUE	TIME (LST)	RECORD VALUE	YEAR	NORMAL VALUE	DEPARTURE FROM NORMAL	LAST YEAR
TEMPERATURE (F)							
YESTERDAY							
MAXIMUM	59	MM	68	1968 1902 1901	56	3	55
MINIMUM	35	400 AM	30	1995 1911	42	-7	50
AVERAGE	47				49	-2	53
PRECIPITATION (IN)							
YESTERDAY	0.00		3.65	1904	0.20	-0.20	0.52
MONTH TO DATE	1.30				2.91	-1.61	4.08
SINCE JUL 1	27.20				24.77	2.43	21.15
SINCE JAN 1	11.00				8.88	2.12	5.94
SNOWFALL (IN)							
YESTERDAY	0.0		MM	MM	0.0	0.0	0.0
MONTH TO DATE	0.0				0.2	-0.2	0.0
SINCE DEC 1	T				0.4	-0.4	T
SINCE JUL 1	T				0.4	-0.4	T
SNOW DEPTH	0						

Please note this information is preliminary and subject to revision. Official and certified climatic data can be accessed at the National Climatic Data Center (NCDC) (http://www.ncdc.noaa.gov/oa/ncdc.html).

Climate Report

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CDUS46 KEKA 190814
CLIEKA

CLIMATE REPORT
NATIONAL WEATHER SERVICE EUREKA CA
1210 AM PST TUE FEB 19 2008

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...THE EUREKA CLIMATE SUMMARY FOR FEBRUARY 18 2008...

CLIMATE NORMAL PERIOD 1971 TO 2000
CLIMATE RECORD PERIOD 1886 TO 2008
```

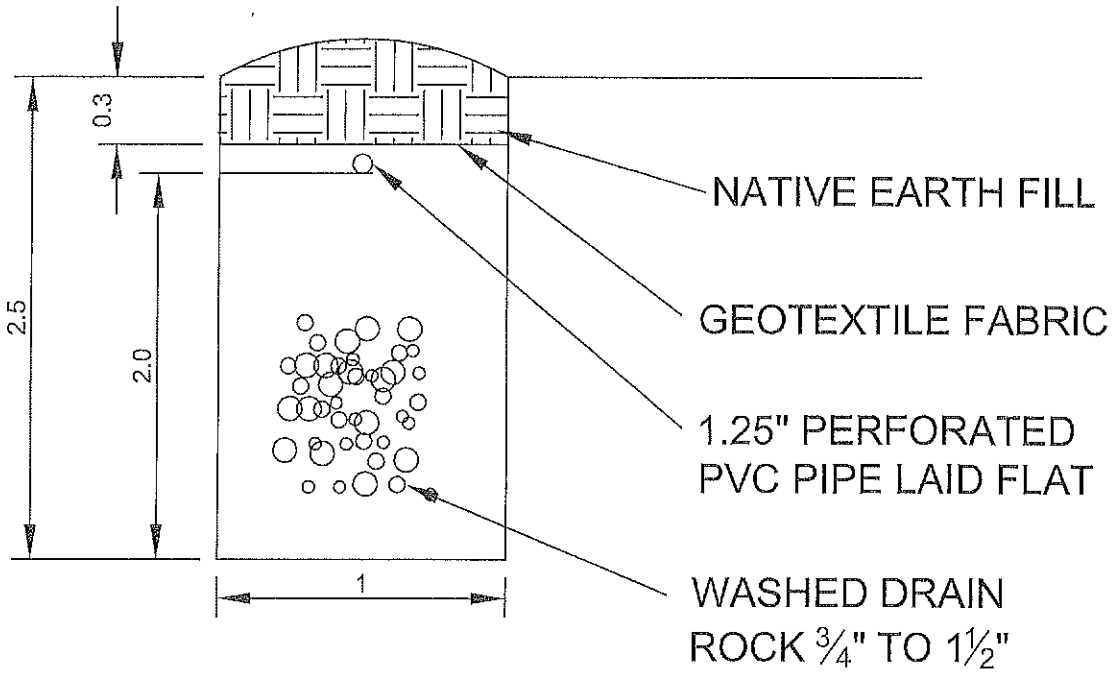
WEATHER ITEM	OBSERVED VALUE	TIME (LST)	RECORD VALUE	YEAR	NORMAL VALUE	DEPARTURE FROM NORMAL	LAST YEAR
TEMPERATURE (F)							
YESTERDAY							
MAXIMUM	49	200 PM	70	1968	56	-7	52
MINIMUM	43	1000 AM	30	2006	42	1	46
AVERAGE	46				49	-3	49
PRECIPITATION (IN)							
YESTERDAY	0.02		2.33	1910	0.20	-0.18	0.12
MONTH TO DATE	1.32				3.51	-2.19	4.24
SINCE JUL 1	27.22				25.37	1.85	21.31
SINCE JAN 1	11.02				9.48	1.54	6.10
SNOWFALL (IN)							
YESTERDAY	MM		MM	MM	0.0	MM	MM
MONTH TO DATE	0.0				0.2	-0.2	0.0
SINCE DEC 1	T				0.4	-0.4	T
SINCE JUL 1	T				0.4	-0.4	T
SNOW DEPTH	0						
DEGREE DAYS							
HEATING							

A.M. BAIRD
ENGINEERING & SURVEYING, INC.
1257 Main Street • P.O. Box 396 • Fortuna, CA. 95540 • (707) 725-5182 • Fax (707) 725-5581

CONSULTING – LAND DEVELOPMENT – DESIGN – SURVEYING

SEPTIC DESIGN: TYPICAL X-SECTION

CLIENT: MIKE McENRY APN 204–331–003
JOB#: 18-4752
DATE: 11/21/2018
BY: MJN



TRENCH X-SECTION

SCALE: 1"=1'

SETBACKS FOR SEPTIC TANKS AND DISPOSAL FIELDS

	Property on Public Water System		Property on Individual Water System	
	Septic Tank	Disposal Field	Septic Tank	Disposal Field
	(in feet)		(in feet)	
Property Line	5	10	25	50
Foundation of Building Outside wall of Mobile Home	5	10	5	10
Wells, Springs, Ocean, Lake or Reservoir	100	100	100	100
Perennial Stream (1)	100	100	100	100
Ephemeral Stream (2)	50	50	50	50
Fill Area, Top of Cuts, or Edge of Steep Slopes >30% (3)	25	25	25	25
Swimming Pools	25	50	25	50

(1) As measured from the line which defines the limit of a 10-year Frequency Flood.

(2) Measured from the edge of the water source.

(3) Where soil depth or depth to ground water below the leaching trench is less than five (5) feet, a minimum set-back distance of fifty (50) feet shall be required.

RECEIVED
DEC 13 2018
HUMBOLDT CO. DIVISION OF ENVIRONMENTAL HEALTH

Humboldt County Department of Health & Human Services

Division of Environmental Health
100 H Street - Suite 100 - Eureka, CA 95501
Phone: 707-445-6215 - Toll Free: 800-963-9241
Fax: 707-441-5699
envhealth@co.humboldt.ca.us

17/18-1642
Bldg #46163

ONSITE WASTEWATER TREATMENT SYSTEM (OWTS) PERMIT APPLICATION

Application is hereby made to the Humboldt County Department of Health & Human Services, Division of Environmental Health (DEH) for a permit to construct, repair, modify, or destroy an onsite wastewater treatment system as specified below in compliance with all county ordinances and state law regulating construction of OWTS.

Type
☒ New Construction ☐ Gray Water
☐ Repair ☐ Modification
☐ Destruction ☐ Permit Renewal

Site Addres	Owner's Name Mike McEnry
Fortuna CA, 95540	Mailing Address P.O. Box 134
Assessor's Parcel No. (APN) 204-331-003	City/State/Zip Hydesville CA, 95547
	Phone (707) 223-4988
Previous APNs	Applicant Name Same
Directions to Site: Take Hwy 36E from Hwy 101 for 1.7 miles to River Bar Rd on right. Travel 1.3 miles to parcel on right.	Mailing Address
	City/State/Zip
	Phone

☐ Standard System ☒ *Non-Standard System
*Please note that non-standard systems require an operating permit pursuant to HCC Title VI, Division I, Chapter 6. The owner/operator will be subject to permit fees and inspections.

Installation Will Serve:
☒ Residence
☐ Commercial
☐ Multiple Housing
☐ Mobile Home Park

No. of Units: 1
No. of bedrooms per unit: 2
Water Supply:
☐ Public ☒ Private

Terms of Permit

1. DEH personnel will be notified a minimum of **48 hours** prior to final inspection. Please note that some systems may require several inspections. **Should situations arise that prohibit a final inspection at the appointed time, the applicant or the applicant's agent shall notify DEH and reschedule the appointment. Failure to do so may result in additional charges to the applicant at the current hourly rate.**
2. An inspection by DEH personnel, or other qualified professional (when approved by DEH), will be obtained prior to covering the system.
3. An inspection will not be performed unless a copy of the approved OWTS design is available at the job site.
4. Any deviation from the approved plan without prior approval from DEH may result in revocation of this permit.

The issuance of a permit in no way implies a DEH guarantee of perfect and indefinite operation of this OWTS. Approval is based upon information submitted by the applicant. **Field conditions that vary significantly from the approved application information may void this permit.**

The undersigned applicant for an OWTS permit certifies as follows:

Contractors' License Law Certification
☐ The applicant's contractor is licensed under the provisions of the Contractors' License Law, under the license number below,

_____
which is in full effect.

OR

☐ The applicant is exempt from the provisions of the Contractor's License Law (owner/builder)

I hereby acknowledge that I have read this application and that the information provided is correct. I agree to comply with all County Ordinances and State Law regulating construction of onsite wastewater treatment systems.

This permit shall expire if work authorized is not commenced:

1. **New Construction – Prior to 1 year following the Building Issuance Date.**
2. **Repair, Modification or Destruction – Prior to 1 year from the date of system design approval.**

_____ 12/4/18
Signature of Owner/Owner's Agent Date

Revised 7-26-16

FOR OFFICE USE ONLY		Legal Conformance:		
Septic Tank Size:	Pump Chamber Size:	No. of Lines:	Line Length:	Trench Depth:
Special Requirements and/or Comments:				
System Design Approved by:			Date:	
Construction Approved by:			Date:	
Amount Paid: $149-		**Receipt No.:** 21015	**Project No.:** 46163	
Additional Amount Due:		**Date Additional Amount Paid:**	**Receipt No.:**	

RECEIVED

DEC 13 2018

HUMBOLDT CO. DIVISION
OF ENVIRONMENTAL HEALTH