

Test Number: PIT-1

Project Name: Freeman Logistics

Project Number: T-8565

Test Date: Thursday, June 8, 2023

Test Procedure: Small-Scale PIT, Reference 6A, 2016 KCSWDM

Hole Dimensions: 3'W x 4'L x 3'D

Hole Area: 12 square feet

Steady State Flow Test			
Time (minutes)	Flow Rate (gpm)	Head (feet)	Cum. Volume (gallons)
0	0.10	1.09	169.00
17	0.10	1.14	173.50

Use mean flow rate over final 30 minutes
of test as steady state infiltration rate

0.10	gallons per minute
0.013	cubic feet per minute

Infiltration rate=steady state flow
divided by area of pit

0.00111	feet per minute
0.013	inches per minute

Falling Head Test	
Time (minutes)	Head (feet)
0.00	1.14
21.00	1.11
36.00	1.08
51.00	1.06
66.00	1.04
81.00	1.02
96.00	0.99
111.00	0.98
126.00	0.96
141.00	0.94
156.00	0.92

Measured Infiltration Rate		
Steady Flow Rate Test	0.80	inches per hour
Falling Head Test	1.02	inches per hour

Test Number: PIT-2

Project Name: Freeman Logistics

Project Number: T-8565

Test Date: Wednesday, June 7, 2023

Test Procedure: Small-Scale PIT, Reference 6A, 2016 KCSWDM

Hole Dimensions: 3'W x 4'L x 2'D

Hole Area: 12 square feet

Steady State Flow Test			
Time (minutes)	Flow Rate (gpm)	Head (feet)	Cum. Volume (gallons)
0	0.5	1.02	113
20	0.40	1.02	126
55	0.40	1.02	140
87	0.40	1.01	153

Use mean flow rate over final 30 minutes
of test as steady state infiltration rate

0.40 gallons per minute
0.05 cubic feet per minute

Infiltration rate=steady state flow
divided by area of pit

0.0045 feet per minute
0.053 inches per minute

Falling Head Test	
Time (minutes)	Head (feet)
0.00	1.01
15.00	0.97
27.00	0.93
42.00	0.88
57.00	0.83
72.00	0.79
87.00	0.76
102.00	0.72
117.00	0.68
132.00	0.65
147.00	0.62

Measured Infiltration Rate		
Steady Flow Rate Test	3.21	inches per hour
Falling Head Test	1.91	inches per hour

Test Number: PIT-3

Project Name: Freeman Logistics

Project Number: T-8565

Test Date: Thursday, June 8, 2023

Test Procedure: Small-Scale PIT, Reference 6A, 2016 KCSWDM

Hole Dimensions: 3'W x 4'L x 2.5'D

Hole Area: 12 square feet

Steady State Flow Test			
Time (minutes)	Flow Rate (gpm)	Head (feet)	Cum. Volume (gallons)
0	1.3	1.09	275
41	1.30	1.16	334
86	1.20	1.17	389
112	1.20	1.19	420

Use mean flow rate over final 30 minutes
of test as steady state infiltration rate

1.20 gallons per minute
0.16 cubic feet per minute

Infiltration rate=steady state flow
divided by area of pit

0.0134 feet per minute
0.160 inches per minute

Falling Head Test	
Time (minutes)	Head (feet)
0.00	1.19
15.00	1.04
30.00	0.9
45.00	0.79
60.00	0.68
75.00	0.56
90.00	0.46
105.00	0.38

Measured Infiltration Rate		
Steady Flow Rate Test	9.63	inches per hour
Falling Head Test	5.55	inches per hour

Test Number: PIT-4

Project Name: Freeman Logistics

Project Number: T-8565

Test Date: Thursday, June 8, 2023

Test Procedure: Small-Scale PIT, Reference 6A, 2016 KCSWDM

Hole Dimensions: 3'W x 4'L x 2'D

Hole Area: 12 square feet

Steady State Flow Test			
Time (minutes)	Flow Rate (gpm)	Head (feet)	Cum. Volume (gallons)
0	1.30	1.04	269
46	1.30	1.00	328
88	1.30	1.00	384

Use mean flow rate over final 30 minutes
of test as steady state infiltration rate

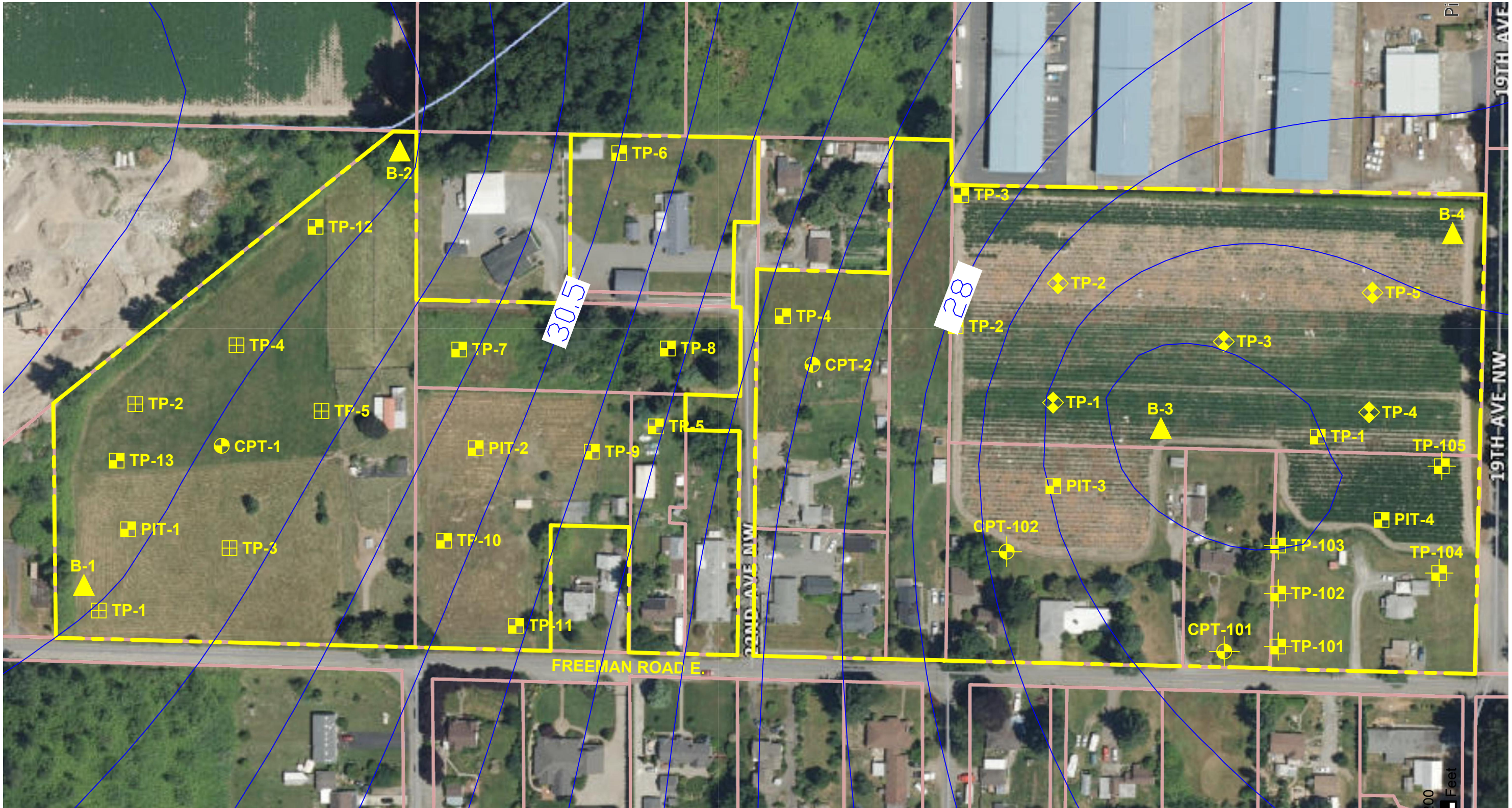
1.30 gallons per minute
0.17 cubic feet per minute

Infiltration rate=steady state flow
divided by area of pit

0.0145 feet per minute
0.174 inches per minute

Falling Head Test	
Time (minutes)	Head (feet)
0.00	1.00
15.00	0.83
30.00	0.66
45.00	0.56
60.00	0.50
75.00	0.45
90.00	0.39

Measured Infiltration Rate		
Steady Flow Rate Test	10.43	inches per hour
Falling Head Test	4.88	inches per hour

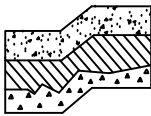


NOTE:
THIS SITE PLAN IS SCHEMATIC. ALL LOCATIONS AND DIMENSIONS ARE APPROXIMATE. IT IS INTENDED FOR REFERENCE ONLY AND SHOULD NOT BE USED FOR DESIGN OR CONSTRUCTION PURPOSES.

REFERENCE:
PIERCE COUNTY PUBLIC GIS

- LEGEND:**
- APPROXIMATE TEST PIT LOCATION (JUN 2021)
 - APPROXIMATE TEST PIT LOCATION (MAR 2019)
 - APPROXIMATE TEST PIT LOCATION (JUN 2022)
 - APPROXIMATE TEST PIT LOCATION (JAN 2019)
 - APPROXIMATE CPT LOCATION (JUN 2021)
 - APPROXIMATE CPT LOCATION (JUN 2022)

- APPROXIMATE BORING LOCATION (FEB 2023)
- SEASONAL HIGH GROUNDWATER CONTOUR (WINTER SEASON 2022-2023)



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Geology and
Environmental Earth Sciences

**SEASONAL HIGH GROUNDWATER
FREEMAN LOGISTICS
PIERCE COUNTY, WASHINGTON**

Proj. No.T-8565

Date NOV 2023

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