

Date: December 4, 2020

To: Town of Mukwonago Plan Commission and Town Board

From: Tim Schwecke, AICP, Town Planner

Subject: Residential allotment for a preliminary plat for 18 residential lots located on east side of Sprague Road (EGLT1826998004); Camtec Inc; Diane Zakrzewski, agent

Application: 2020-20; <https://s.zoninghub.com/7FNYY79962>

Meeting: December 7, 2020 Plan Commission and Town Board meeting

The Plan Commission and Town Board evaluated the proposed subdivision at their meeting on October 5, 2020 and gave a score of 7.3; a minimum of 10 points is required for approval. The matter was tabled so the Town could evaluate the criteria.

The intent is to go through the scoring exercise again at this meeting. Plan Commission and Town Board members are encouraged to ask question regarding the criteria and how they may apply in this instance.

Camtec Inc (Diane Zakrzewski, agent) has submitted additional materials for your consideration. Please also find attached a blank worksheet for your use, which includes the planner's and engineer's score.

A. Residential development permit review

A minimum of 10 points is required for approval.

Motion by Town Board and Plan Commission

The proposed subdivision scores ___ points based on a joint evaluation by the Town Board and Plan Commission.

B. Residential allotment

The petitioner is requesting an allotment of 8 residential development permits for the first phase (2021) and 10 in the second phase (2022). (to be verified)

Potential motion

Approve the allocation of 8 residential development permits provided the subdivider submits a preliminary plat to the Town of Eagle and obtains approval of the same within 12 months of this date

Attachments

1. Application materials
2. Blank evaluation worksheet

Subdivision name: Camtec Inc
Review date: December 7, 2020

Criteria	Score									Total (Across)	Average Score
	Don M.	Dan W.	Jan S.	Steve M.	Chris M.	Jacki L.	Irene R.	John M.	Bob K.		
1. Preservation of environmental corridors, isolated natural areas, and natural topography											
2. Surface water drainage											
3. Overall density of the development											
4. Preservation of agricultural lands and the rural character											
5. Traffic circulation and capacity of major streets											
6. Soils consideration for roads and basement construction											
7. Lot size variation											
8. Buffers											
9. Future public costs and benefits											
Total (Average Score)											

Town Planner Score	Town Engineer Score
4	4
3	2
2	2
-1	-1
2	0
-1	2
1	0
1	1
0	0
11	10

Note: A score of 10 or more is needed for approval

Dear Tim,

Please present to the Town Board and Planning Commission at the next town meeting on November 5, 2020, our response to the 10/5/20 allotment votes.

We state as follows:

Re: Items #2 and #6 (chart attached)

Several weeks ago we delivered to the town clerk written detailed soil borings and test pits reports by qualified professional soil testing firms.

At the time of the allotment voting, these reports were not in the hands of the voters, and therefore we ask that #2 "Surface Water Drainage" and #6 "Soils consideration for roads and basement construction" of the allotment application be reviewed and rescored, based on facts as listed in said reports. Facts cannot be denied that the land to be developed contains excellent soil to support the highest scoring for items #2 and #6.

Re: Town Planner Score and Town Engineer Score (chart attached)

The town planner and town engineer presented their professional opinions and gave scores of 11 and 10 respectively, which would allow development to proceed.

Camtec Inc. had submitted the allotment application along with the fees required for said allotment review by the planner and engineer. We accept their professional opinions and request that their scores be the criteria for allotment scoring, (with consideration to review and rescore items #2 and #3 based on the submitted soil reports.)

Re: Voters' scores (refer to chart)

The voting among the 9 members on 10/5/20 during the town meeting was done in haste. The scoring results show lack of continuity and agreement among the members.

Note that the scores of the Town Planner and the Town Engineer show a basic unity of opinion as reflected in the 11 and 10 scores.

Respectfully submitted,
Sandy Campbell/Diane Zak

Royal Aire Estates

October 5, 2020

	Don	Dan	Jan	Steve	Chris	Jacki	Irene	John	Bob	Total	Average
1	4	3	3	4	3	3	3	4	3	30	3.33
2	3	-3	3	2	2	0	2	2	0	11	1.22
3	2	0	2	2	2	1	2	2	0	13	1.44
4	1	-2	0	-1	-1	-1	-1	-1	-1	-7	-0.78
5	2	0	1	-1	1	1	2	1	0	7	0.78
6	1	0	0	2	2	1	2	2	0	10	1.11
7	1	-2	0	0	1	0	1	1	0	2	0.22
8	1	-2	1	1	1	0	1	-1	0	2	0.22
9	0	0	0	-1	0	0	0	0	-1	-2	-0.22

7.32

#2 "Surface Water Drainage"

#6 "Soils consideration for ROADS AND basement construction"

SOIL EVALUATION REPORT

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In accordance with Comm 85, Wis. Adm. Code

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Please print all information.

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County	<u>Waukesha</u>
Parcel I.D.	
Reviewed by	Date

Property Owner <u>Circle C-2 Plaza LLC</u>	Property Location Govt. Lot <u>5W</u> 1/4 NW 1/4 S <u>25</u> T <u>5</u> N R <u>17</u> E (or) <u>W</u>
Property Owner's Mailing Address <u>W. 309 S. 4860 Commercial Dr.</u>	Lot # <u>—</u> Block # <u>—</u> Subd. Name or CSM# <u>Proposed Land Division</u>
City <u>North Prairie</u> State <u>WI</u> Zip Code <u>53153</u> Phone Number <u>()</u>	<input type="checkbox"/> City <u>Eagle</u> <input type="checkbox"/> Village <input checked="" type="checkbox"/> Town <u>Sprague Rd.</u>

☒ New Construction Use: ☒ Residential / Number of bedrooms ? Code derived design flow rate _____ GPD

☐ Replacement ☐ Public or commercial - Describe: _____

Parent material _____ Flood Plain elevation if applicable _____ ft.

General comments and recommendations: _____

2 Boring # ☐ Boring ☒ Pit Ground surface elev. 886.5 ft. Depth to limiting factor 110 in.

Horizon	Depth In.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	Roots	Soil Application Rate GPD/ft²	
									*Eff#1	*Eff#2
<u>1</u>	<u>0-10</u>	<u>10Yr 3/2</u>	<u>None</u>	<u>sl</u>	<u>2-f-sbk</u>	<u>Mfr</u>	<u>as</u>	<u>2f</u>	<u>0.6</u>	<u>1.0</u>
<u>2</u>	<u>10-23</u>	<u>7.5Yr 4/4</u>	<u>"</u>	<u>sc</u>	<u>2-M-sbk</u>	<u>Mfr</u>	<u>cw</u>	<u>1vf</u>	<u>0.4</u>	<u>0.6</u>
<u>3</u>	<u>23-110</u>	<u>10Yr 6/4</u>	<u>"</u>	<u>vgrs</u>	<u>0-5g</u>	<u>Ml</u>	<u>—</u>	<u>—</u>	<u>0.7</u>	<u>1.6</u>

3 Boring # ☐ Boring ☒ Pit Ground surface elev. 882.1 ft. Depth to limiting factor 120 in.

Horizon	Depth In.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	Roots	Soil Application Rate GPD/ft²	
									*Eff#1	*Eff#2
<u>1</u>	<u>0-12</u>	<u>10Yr 3/2</u>	<u>None</u>	<u>L</u>	<u>2-f-sbk</u>	<u>Mfr</u>	<u>as</u>	<u>2f</u>	<u>0.6</u>	<u>0.8</u>
<u>2</u>	<u>12-39</u>	<u>10Yr 4/4</u>	<u>"</u>	<u>cl</u>	<u>2-M-sbk</u>	<u>Mfr</u>	<u>cw</u>	<u>1vf</u>	<u>0.4</u>	<u>0.6</u>
<u>3</u>	<u>39-120</u>	<u>10Yr 6/4</u>	<u>"</u>	<u>vgrs</u>	<u>0-5g</u>	<u>Ml</u>	<u>—</u>	<u>—</u>	<u>0.7</u>	<u>1.6</u>

* Effluent #1 = BOD₅ > 30 ≤ 220 mg/L and TSS > 30 ≤ 150 mg/L

* Effluent #2 = BOD₅ ≤ 30 mg/L and TSS ≤ 30 mg/L

CST Name (Please Print) <u>DONALD E. SAMUELS</u>	Signature <u>Don. Samuels</u>	CST Number <u>2146</u>
Address <u>S. 55 W. 33749 HWY. ZZ</u> <u>NORTH PRAIRIE, WI 53153</u>	Date Evaluation Conducted <u>12/26/07</u>	Telephone Number <u>262-392-2743</u>

Property Owner Circle C-2 Plaza

Parcel ID # _____

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Boring #

☐ Boring☒ PitGround surface elev. 888.1 ft.Depth to limiting factor 112 in.

Horizon	Depth In.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	Roots	Soil Application Rate GPD/ft ²	
									*Eff#1	*Eff#2
1	0-10	10Yr 3/2	NONE	L	2-fsbk	Mfr	as	2f	0.6	0.8
2	10-22	10Yr 4/4	"	cl	2-Msbk	Mfr	cw	lvf	0.4	0.6
3	22-46	10Yr 6/4	"	grs	0-5g	Ml	cw	-	0.7	1.6
4	46-84	10Yr 6/4	"	S	0-5g	Ml	cw	-	0.7	1.6
5	84-112	10Yr 6/4	"	vgrs	0-5g	Ml	-	-	0.7	1.6

5

Boring #

☐ Boring☒ PitGround surface elev. 888.4 ft.Depth to limiting factor 113 in.

Horizon	Depth In.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	Roots	Soil Application Rate GPD/ft ²	
									*Eff#1	*Eff#2
1	0-12	10Yr 3/2	NONE	L	2-fsbk	Mfr	as	2f	0.6	0.8
2	12-25	10Yr 4/4	"	cl	2-Msbk	Mfr	cw	lvf	0.4	0.6
3	25-113	10Yr 6/4	"	vgrs	0-5g	Ml	-	-	0.7	1.6

6

Boring #

☐ Boring☒ PitGround surface elev. 889.1 ft.Depth to limiting factor 120 in.

Horizon	Depth In.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	Roots	Soil Application Rate GPD/ft ²	
									*Eff#1	*Eff#2
1	0-13	10Yr 3/2	NONE	L	2-fsbk	Mfr	as	2f	0.6	0.8
2	13-32	10Yr 4/4	"	cl	2-Msbk	Mfr	cw	lvf	0.4	0.6
3	32-44	10Yr 6/4	"	S	0-5g	Ml	cw	-	0.7	1.6
4	44-120	10Yr 6/4	"	vgrs	0-5g	Ml	-	-	0.7	1.6

* Effluent #1 = BOD₅ > 30 ≤ 220 mg/L and TSS > 30 ≤ 150 mg/L* Effluent #2 = BOD₅ ≤ 30 mg/L and TSS ≤ 30 mg/L

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SOIL EVALUATION REPORT

Page 3 of 8

In accordance with Comm 85, Wis. Adm. Code

Attach complete site plan on paper not less than 8 1/2 x 11 inches in size. Plan must include, but not limited to: vertical and horizontal reference point (BM), direction and percent slope, scale or dimensions, north arrow, and location and distance to nearest road.

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County	<u>Waukesha</u>
Parcel I.D.	
Reviewed by	Date

Property Owner <u>Circle C-Z Plaza LLC</u>	Property Location Govt. Lot <u>SW 1/4 NW 1/4 S25 T 5 N R 17 E (or) NE</u>
Property Owner's Mailing Address <u>W. 309 S. 4860 Commercial Dr.</u>	Lot # <u>—</u> Block # <u>—</u> Subd. Name or CSM# <u>Proposed Land Division</u>
City <u>North Prairie, WI</u> State <u>WI</u> Zip Code <u>53153</u> Phone Number <u>()</u>	<input type="checkbox"/> City <input type="checkbox"/> Village <input checked="" type="checkbox"/> Town <u>Eagle</u> Nearest Road <u>Sprague Rd.</u>
<input checked="" type="checkbox"/> New Construction Use: <input checked="" type="checkbox"/> Residential / Number of bedrooms <u>?</u> Code derived design flow rate _____ GPD	
<input type="checkbox"/> Replacement <input type="checkbox"/> Public or commercial - Describe: _____	
Parent material _____ Flood Plain elevation if applicable _____ ft.	
General comments and recommendations:	

7 Boring # ☐ Boring ☒ Pit Ground surface elev. 885.6 ft. Depth to limiting factor 115 in.

Horizon	Depth In.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	Roots	Soil Application Rate GPD/ft ²	
									*Eff#1	*Eff#2
1	0-11	10Y-3/2	None	L	2-f-sbk	Mfr	as	2f	0.6	0.8
2	11-27	10Y-4/4	"	cl	2-M-sbk	Mfr	cw	1vf	0.4	0.6
3	27-115	10Y-6/4	"	vgrs	0-5g	Ml	—	—	0.7	1.6

8 Boring # ☐ Boring ☒ Pit Ground surface elev. 885.9 ft. Depth to limiting factor 113 in.

Horizon	Depth In.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	Roots	Soil Application Rate GPD/ft ²	
									*Eff#1	*Eff#2
1	0-12	10Y-3/2	None	L	2-f-sbk	Mfr	as	2f	0.6	0.8
2	12-28	10Y-4/4	"	cl	2-M-sbk	Mfr	cw	1vf	0.4	0.6
3	28-113	10Y-6/4	"	vgrs	0-5g	Ml	—	—	0.7	1.6

* Effluent #1 = BOD₅ > 30 ≤ 220 mg/L and TSS > 30 ≤ 150 mg/L

* Effluent #2 = BOD₅ ≤ 30 mg/L and TSS ≤ 30 mg/L

CST Name (Please Print) <u>DONALD E. SAMUELS</u>	Signature <u>Don. Samuels</u>	CST Number <u>2146</u>
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Property Owner Circle C-2 Plaza

Parcel ID # _____

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Boring #

☐ Boring☒ PitGround surface elev. 885.4 ft.Depth to limiting factor 110 in.

Horizon	Depth In.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	Roots	Soil Application Rate GPD/ft ²	
									*Eff#1	*Eff#2
1	0-11	10Y-3/2	NONE	L	2-f-sbk	Mfr	as	2f	0.6	0.8
2	11-20	10Y-4/4	"	cl	2-M-sbk	Mfr	cw	1vf	0.4	0.6
3	20-110	10Y-6/4	"	vgrs	0-5g	Ml	—	—	0.7	1.6

10

Boring #

☐ Boring☒ PitGround surface elev. 884.6 ft.Depth to limiting factor 110 in.

Horizon	Depth In.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	Roots	Soil Application Rate GPD/ft ²	
									*Eff#1	*Eff#2
1	0-12	10Y-3/2	NONE	L	2-f-sbk	Mfr	as	2f	0.6	0.8
2	12-22	10Y-4/4	"	cl	2-M-sbk	Mfr	cw	1vf	0.4	0.6
3	22-110	10Y-6/4	"	vgrs	0-5g	Ml	—	—	0.7	1.6

11

Boring #

☐ Boring☒ PitGround surface elev. 880.9 ft.Depth to limiting factor 120 in.

Horizon	Depth In.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	Roots	Soil Application Rate GPD/ft ²	
									*Eff#1	*Eff#2
1	0-14	10Y-3/2	NONE	L	2-f-sbk	Mfr	as	2f	0.6	0.8
2	14-33	10Y-4/4	"	cl	2-M-sbk	Mfr	cw	1vf	0.4	0.6
3	33-120	10Y-6/4	"	vgr/s	0-5g	Ml	—	—	0.7	1.6

* Effluent #1 = BOD₅ > 30 ≤ 220 mg/L and TSS > 30 ≤ 150 mg/L* Effluent #2 = BOD₅ ≤ 30 mg/L and TSS ≤ 30 mg/L

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SOIL EVALUATION REPORT

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County	<u>Waukesha</u>
Parcel I.D.	
Reviewed by	Date

Property Owner <u>Circle C-2 Plaza LLC</u>		Property Location Govt. Lot <u>SW</u> 1/4 NW 1/4 S 25 T 5 N R 17 E (or) <u>NE</u>	
Property Owner's Mailing Address <u>W. 309 S. 4860 Commercial Dr.</u>		Lot # <u>—</u>	Block # <u>—</u>
City <u>North Prairie, WI</u>		Subd. Name or CSM# <u>Proposed Land Division</u>	
State <u>WI</u>	Zip Code <u>53153</u>	Phone Number <u>() () ()</u>	Nearest Road <u>Eagle Sprague Rd.</u>
<input type="checkbox"/> City		<input type="checkbox"/> Village <input checked="" type="checkbox"/> Town	

☒ New Construction Use: ☒ Residential / Number of bedrooms 2 Code derived design flow rate _____ GPD

☐ Replacement ☐ Public or commercial - Describe: _____

Parent material _____ Flood Plain elevation if applicable _____ ft.

General comments and recommendations: _____

Horizon	Depth In.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	Roots	Soil Application Rate GPD/ft ²	
									*Eff#1	*Eff#2
1	0-12	10Yr 3/2	None	L	2-fsbk	Mfr	as	2f	0.6	0.8
2	12-22	10Yr 4/4	"	cl	2-Hsbk	Mfr	cu	1uf	0.4	0.6
3	22-60	10Yr 5/4	"	fsl	0-M	Mfr	cu	—	0.2	0.5
4	60-132	10Yr 6/4	"	vgrs	0-Sg	Ml	—	—	0.7	1.6

Horizon	Depth In.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	Roots	Soil Application Rate GPD/ft ²	
									*Eff#1	*Eff#2
1	0-12	10Yr 3/2	None	L	2-fsbk	Mfr	as	2f	0.6	0.8
2	12-20	10Yr 4/4	"	cl	2-Hsbk	Mfr	cu	1uf	0.4	0.6
3	20-20	10Yr 6/4	"	vgrs	0-Sg	Ml	—	—	0.7	1.6
#3 Has Alternating 12" layers of S										

* Effluent #1 = BOD, > 30 ≤ 220 mg/L and TSS > 30 ≤ 150 mg/L

* Effluent #2 = BOD, ≤ 30 mg/L and TSS ≤ 30 mg/L

CST Name (Please Print) DONALD E. SAMUELS	Signature <i>Don. Samuels</i>	CST Number 2146
Address S. 55 W. 33749 HWY. ZZ NORTH PRAIRIE, WI 53153	Date Evaluation Conducted 12/26/07	Telephone Number 262-342-2743

Property Owner

Circle C-Z Plaza

Parcel ID #

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116

Boring #

☐ Boring☒ Pit

Ground surface elev. 888.3 ft.

Depth to limiting factor 120 in.

Horizon	Depth In.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	Roots	Soil Application Rate GPD/ft ²	
									*Eff#1	*Eff#2
1	0-11	10Yr 3/2	None	L	2-f-sbk	Mfr	as	2f	0.6	0.8
2	11-37	10Yr 4/4	"	cl	2-M-sbk	Mfr	cw	1vf	0.4	0.6
3	37-120	10Yr 6/2	"	vgrs	0-5g	Ml	—	—	0.7	1.6

117

Boring #

☐ Boring☒ Pit

Ground surface elev. 890.4 ft.

Depth to limiting factor 116 in.

Horizon	Depth In.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	Roots	Soil Application Rate GPD/ft ²	
									*Eff#1	*Eff#2
1	0-14	10Yr 3/2	None	L	2-f-sbk	Mfr	as	2f	0.6	0.8
2	14-34	7.5Yr 4/4	"	cl	2-M-sbk	Mfr	cw	1vf	0.4	0.6
3	34-116	10Yr 6/4	"	vgrs	0-5g	Ml	—	—	0.7	1.6

118

Boring #

☐ Boring☒ Pit

Ground surface elev. 889.2 ft.

Depth to limiting factor 115 in.

Horizon	Depth In.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	Roots	Soil Application Rate GPD/ft ²	
									*Eff#1	*Eff#2
1	0-11	10Yr 3/2	None	L	2-f-sbk	Mfr	as	2f	0.6	0.8
2	11-27	7.5Yr 4/4	"	cl	2-M-sbk	Mfr	cw	1vf	0.4	0.6
3	27-115	10Yr 6/4	"	vgrs	0-5g	Ml	—	—	0.7	1.6

* Effluent #1 = BOD₅ > 30 ≤ 220 mg/L and TSS > 30 ≤ 150 mg/L* Effluent #2 = BOD₅ ≤ 30 mg/L and TSS ≤ 30 mg/L

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City <u>North Prairie</u> State <u>WI</u> Zip Code <u>53153</u> Phone Number <u>()</u>	<input type="checkbox"/> City <input type="checkbox"/> Village <input checked="" type="checkbox"/> Town Nearest Road <u>Sprague Rd.</u>

☒ New Construction Use: ☒ Residential / Number of bedrooms ? Code derived design flow rate _____ GPD

☐ Replacement ☐ Public or commercial - Describe: _____

Parent material _____ Flood Plain elevation if applicable _____ ft.

General comments and recommendations:

19 Boring # ☐ Boring ☒ Pit Ground surface elev. 888.1 ft. Depth to limiting factor 120 in.

Horizon	Depth In.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	Roots	Soil Application Rate GPD/ft ²	
									*Eff#1	*Eff#2
1	0-13	10Yr 3/2	None	L	2-f-sbk	Mfr	as	2f	0.6	0.8
2	13-38	10Yr 4/4	"	cl	2-M-sbk	Mfr	cw	14f	0.4	0.6
3	38-120	10Yr 6/4	"	vgrs	0-5g	Ml	—	—	0.7	1.6

20 Boring # ☐ Boring ☒ Pit Ground surface elev. 888.0 ft. Depth to limiting factor 120 in.

Horizon	Depth In.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	Roots	Soil Application Rate GPD/ft ²	
									*Eff#1	*Eff#2
1	0-14	10Yr 3/2	None	sl	2-f-sbk	Mfr	as	2f	0.6	1.0
2	14-28	10Yr 4/4	"	sl	2-M-sbk	Mfr	cw	14f	0.4	0.6
3	28-83	10Yr 6/4	"	s	0-5g	Ml	cw	—	0.7	1.6
4	83-120	10Yr 6/4	"	vgrs	0-5g	Ml	—	—	0.7	1.6

* Effluent #1 = BOD > 30 ≤ 220 mg/L and TSS > 30 ≤ 150 mg/L

* Effluent #2 = BOD < 30 mg/L and TSS ≤ 30 mg/L

CST Name (Please Print) <u>DONALD E. SAMUELS</u>	Signature <u>Don. Samuels</u>	CST Number <u>2146</u>
Address <u>S. 55 W. 33749 HWY. ZZ</u> <u>NORTH PRAIRIE, WI 53153</u>	Date Evaluation Conducted <u>12/26/07</u>	Telephone Number <u>262-392-2743</u>

Property Owner

Circle C-Z Plaza

Parcel ID #

Page 8 of 8

21

Boring #

☐ Boring☒ Pit

Ground surface elev. 888.7 ft.

Depth to limiting factor 115 in.

Horizon	Depth In.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	Roots	Soil Application Rate GPD/ft ²	
									*Eff#1	*Eff#2
1	0-12	10Y-3/2	None	sl	2-f-sbk	Mfr	as	2f	0.6	1.0
2	12-30	7.5Y-4/4	"	sl	2-H-sbk	Mfr	lw	lvf	0.4	0.6
3	30-115	10Y-6/4	"	vars	0-5g	Ml	—	—	0.7	1.6

Boring #

☐ Boring☐ Pit

Ground surface elev. _____ ft.

Depth to limiting factor _____ in.

Horizon	Depth In.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	Roots	Soil Application Rate GPD/ft ²	
									*Eff#1	*Eff#2

Boring #

☐ Boring☐ Pit

Ground surface elev. _____ ft.

Depth to limiting factor _____ in.

Horizon	Depth In.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	Roots	Soil Application Rate GPD/ft ²	
									*Eff#1	*Eff#2

* Effluent #1 = BOD₅ > 30 ≤ 220 mg/L and TSS > 30 ≤ 150 mg/L* Effluent #2 = BOD₅ ≤ 30 mg/L and TSS ≤ 30 mg/L

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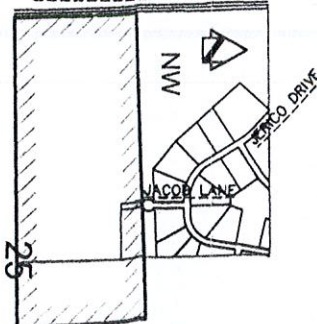
SYSTEM, SOUTH ZONE.
CONC. MON. WITH BRASS CAP.
318,903.93 } GRID
2,417,241.54 } GRID

400
SCALE IN FEET

LEGEND

- IRON PIPE 18" x 1" DIA.
PLACED 1.13 LBS. PER LIN. FT
- 1" IRON PIPE FOUND
- CONC. MON. W/ BRASS CAP
- SOIL BORING LOCATION PER
DONALD E. SAMUELS, DATED
12/26/07

SPRAGUE ROAD



LOCATION MAP
NW 1/4 SEC 25-5-17
SCALE = 1" = 2000'

OUTLOT-4

NOTES:
THIS CERTIFIED SURVEY MAP
SHOWS ONLY APPROXIMATE
LOCATIONS FOR THE WETLAND
AND PRIMARY ENVIRONMENTAL
CORRIDOR BOUNDARIES.
WETLAND AND/OR PRIMARY
ENVIRONMENTAL CORRIDOR
DELINEATIONS MAY BE REQUIRED
PRIOR TO THE FURTHER DIVISION
OF LOT 2.

THOSE AREAS WITHIN THE
PRIMARY ENVIRONMENTAL
CORRIDOR (PEC) ARE SUBJECT TO
THE PRIMARY ENVIRONMENTAL
CORRIDOR PRESERVATION
RESTRICTIONS PER ORDINANCE
OF 07-07 TOWN OF EAGLE NOTED
ON SHEET 6 AND THOSE AREAS
WITHIN THE PEC, THE WETLAND
OR THE 100 YEAR FLOODPLAIN
ARE SUBJECT TO THE PRIMARY
ENVIRONMENTAL
CORRIDOR/WETLAND/FLOODPLAIN
PRESERVATION AREA
RESTRICTIONS PER WAUKESHA
COUNTY DEPARTMENT OF PARKS
AND LAND USE NOTED ON SHEET 7.

SURVEYOR:
JAHNKE & JAHNKE ASSOC., INC.
711 W. MORELAND BLVD.
WAUKESHA, WISCONSIN 53188
(262) 542-5797

OWNER:
CIRCLE C-Z PLAZA LLC
W309 S4860 COMMERCIAL DR
NORTH PRAIRIE, WISCONSIN 53153

TOWN OF EAGLE ZONING: RRE-1
RESIDENTIAL RURAL ESTATE
MIN. FRONT SETBACK - 50 FT
MIN. SIDE & REAR SETBACK - 30 FT

ALL DIMENSIONS SHOWN ARE
MEASURED TO THE NEAREST
THOUSANDTHS OF A FOOT.

REFERENCE BEARING:
THE WEST LINE OF THE NW 1/4 OF SECTION 25,
T5N, R17E WAS USED AS THE REFERENCE
BEARING AND HAS A BEARING OF NORTH
01°47'26" WEST BASED ON THE WISCONSIN STATE
PLANE COORDINATE SYSTEM (SOUTH ZONE).

REFERENCE BENCHMARK: 902.79 (NGVD 1929) NW
CORNER OF THE NW 1/4 SEC 25-5-17
THOSE AREAS WITHIN 300 FEET OF JERICO
CREEK ARE ALSO ZONED EC ENVIRONMENTAL
CORRIDOR AND C-1 CONSERVANCY, UNDER THE
WAUKESHA COUNTY SHORELAND FLOODLAND
PROTECTION ORDINANCE. IN THESE AREAS, THE
MINIMUM REQUIRED ROAD SETBACK IS 50 FEET,
THE MINIMUM REQUIRED SIDE YARD AND REAR
YARD OFFSET IS 35 FEET, AND THE MINIMUM
REQUIRED CONSERVANCY SETBACK IS 75 FEET,
UNLESS MODIFIED BY PROVISIONS CONTAINED
WITHIN THE WAUKESHA COUNTY SHORELAND
FLOODLAND PROTECTION ORDINANCE.

ADDITION No. 1

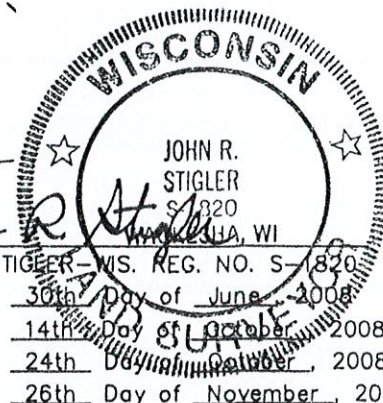
JERICO CORNERS

OUTLOT-5

TO MEANDER LINE
27,199 sq. ft.
0.6244 acres
TO CTR. OF CREEK
±120,224 sq. ft.
±2.7600 acres

OUTLOT-1

TO MEANDER LINE
27,199 sq. ft.
0.6244 acres
TO CTR. OF CREEK
±120,224 sq. ft.
±2.7600 acres



THIS INSTRUMENT WAS DRAFTED BY JOHN R. STIGLER

SPRAGUE ROAD

-- N01°47'26"W
N01°47'26"W WEST LINE OF THE NW 1/4 OF 25-5-17

2662.06' -- (SEWRPC)
2661.993' (SURVEY)

1366.030'
N 88°08'34" E 50.000'

S01°47'26"E 1297.618'
S 89°17'16" E 50.009'
S01°47'26"E 1295.963'
B-21 EL. 888.7
50' DEDICATED TO THE
PUBLIC FOR ROAD
PURPOSES

SEE SHEET 3 FOR
BUILDING DETAILS

B-3 EL. 887.1

B-20 EL. 888.0

B-4 EL. 888.1

B-19 EL. 888.1

B-5 EL. 888.4

B-18 EL. 889.2

B-6 EL. 889.1

B-17 EL. 890.4

APPROXIMATE WETLAND BOUNDARY - PER DNR
WETLAND INVENTORY, AS SHOWN ON
WAUKESHA COUNTY GIS INTERNET MAPPING
SITE.

LOT-2

B-7 4,068,130 SQ. FT. TO CTR CREEK
EL. 885.6 93.3914 ACRES TO CTR. CREEK
4,011,901 SQ. FT. TO MEANDER LINE
92.1006 ACRES TO MEANDER LINE

B-8 EL. 885.9

B-15 EL. 890.2

B-14 EL. 891.1

B-16 EL. 888.3

B-9 EL. 884.6

70' RAD. TEMP. ROAD
EASEMENT (SEE SHEET 2)
SEE SHEET 2 FOR
LOT 1 DETAILS

B-10 EL. 884.6

B-11 EL. 880.9

B-12 EL. 880.7

WOODS EDGE

EAST LINE OF THE NW 1/4 OF 25-5-17

WAUKESHA COUNTY SHORELAND AND FLOODLAND
PROTECTION ORDINANCE JURISDICTIONAL LIMITS

SHR

APPROXIMATE
WETLAND BOUNDARY
SEE NOTE ABOVE

SHR

SHR

S 01°11'03" E 1361.664'
± 10' WIDE JERICO CREEK LOCATED BY
JAHNKE & JAHNKE ASSOC. ON APRIL 3, 2008
WATER ELEV. 840.4 (SEE SHEET 4 FOR
MEANDER LINE DETAILS)

UNPLATTED LANDS

SE CORNER OF THE NE 1/4
OF SEC 25, T5N, R17E

TO MEANDER LINE
32,447 sq. ft.
0.7449 acres

FILE NAME: S7294A\dwg\S7294-4.dwg
P.S. EAGLE 436

PRELIMINARY PLAT
TOWN OF EAGLE
RE: ROYAL AIRE ESTATES

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TO OBTAIN LOCATIONS OF PARTICIPANTS UNDERGROUND FACILITIES BEFORE YOU DIG IN WISCONSIN



CALL DIGGERS HOTLINE
811 OR 1-800-242-8511 TOLL FREE
WIS. STATUTE 182.017(1574) REQUIRES MIN. 3 WORK DAYS NOTICE BEFORE YOU EXCAVATE
MILW. AREA 1-414-259-1181

NOTE: The location and size of the underground structures and utilities shown hereon have been located to a reasonable degree of accuracy, but the Engineer and/or Surveyor does not guarantee their exact location or the location of others not shown. Contact Diggers Hotline, Inc., Etc.



ADDRESS: W349 S9870 SPRAGUE RD.
DRAWN BY: J.R.P. CHECKED BY: J.R.S. DATE: JULY 24, 2020
FILE INDEX: EAGLE 100 BOOK NUMBER: S7294A JOB NUMBER: S7294A
EAGLE 100 BOOK NUMBER: S7294A JOB NUMBER: S7294A
711 WEST MORELAND BOULEVARD, WAUKESHA, WISCONSIN 53188
PHONE # (262) 442-5797 - EMAIL: SURVEY@JAHNKEANDJAHNKE.COM
WEBSITE: JAHNKEANDJAHNKE.COM

JAHNKE & JAHNKE ASSOCIATES, LLC.
ENGINEERS - PLANNERS - SURVEYORS
ENGINEERING SOLUTIONS SINCE 1964

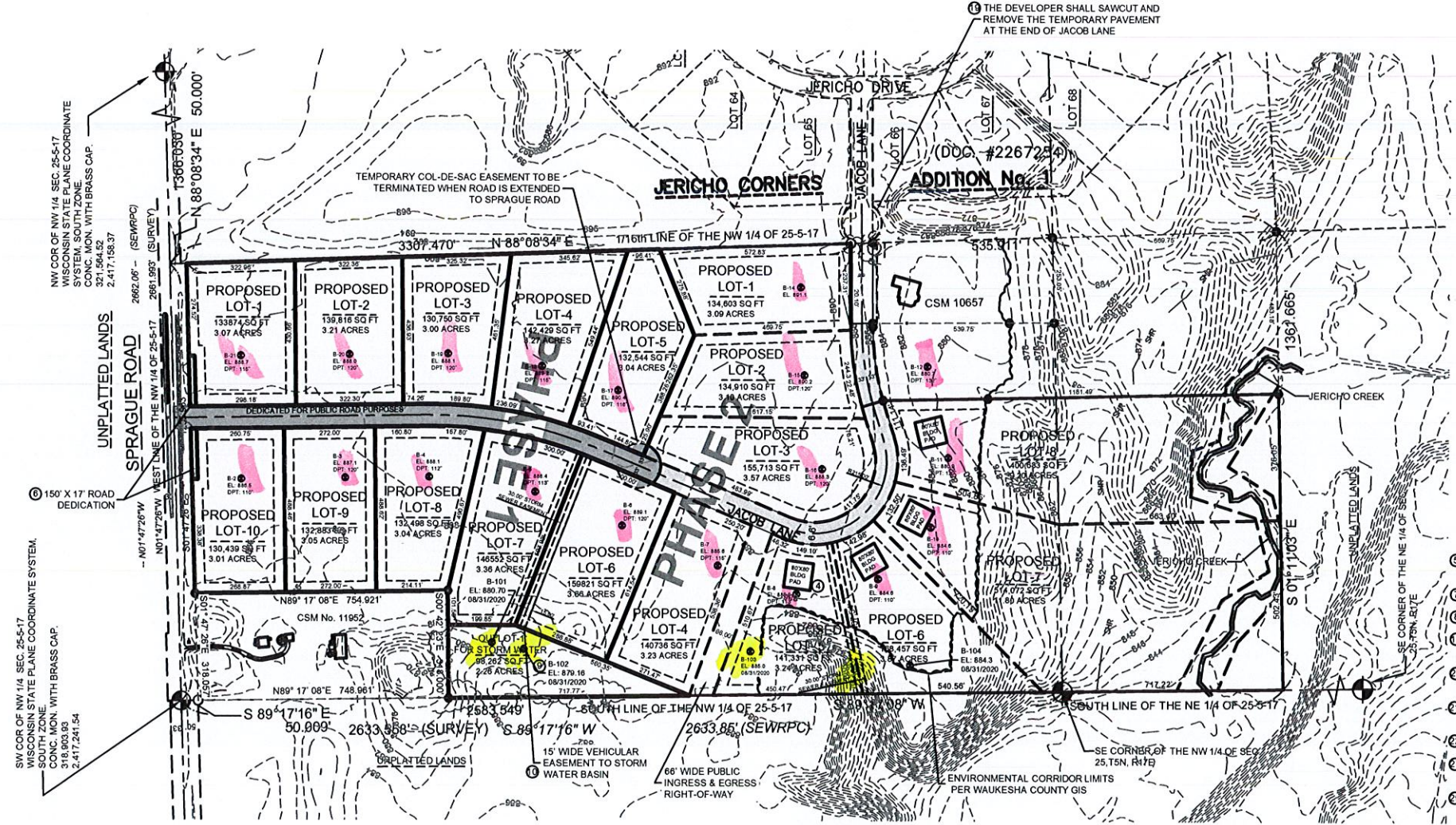
FOR: CAMTEC INC.
BEING IN THE SW 1/4 OF THE NE 1/4 OF SECTION 25 AND SE 1/4 AND SW 1/4 OF THE NW 1/4 OF SECTION 25 T.5N. R.17E. TOWN OF EAGLE, WAUKESHA COUNTY, WISCONSIN.

REVISIONS	
DATE: SEPTEMBER 03, 2020	BY: J.R.P.
DATE: SEPTEMBER 21, 2020	BY: J.R.S.
DATE: SEPTEMBER 28, 2020	BY: J.R.S.
SHEET: 01 OF 01	

FILE NAME: S:\projects\17244\dwg\17244A_ CONCEPT PLAN.dwg

- LEGEND**
- IRON PIPE FOUND
 - CONCRETE MONUMENT FOUND
 - BORING LOCATION
 - POWER POLE
 - FLOODPLAIN
 - SHORELAND
- FP
SR

- ZONING REQUIREMENTS:**
- ZONING: RR 15
 - SIDE SETBACK: 30'
 - FRONT SETBACK: 35'
 - OFFSET: 30'
 - MAX HEIGHT: 35'
 - MIN AREA: 3.00 ACRES
 - MIN AVERAGE LOT WIDTH: 200'
 - MIN FRONTAGE: 33'



- NOTE: CURRENT LONG TIME PROPERTY OWNER STATES THAT "THERE ARE NO DRAIN TILES ON THE PROPERTY"
- NOTE: 220,151 SQUARE FEET DEDICATED FOR PUBLIC ROAD PURPOSES
- NOTE: ROAD CENTERLINE RADIUS IS 215 FEET APPROPRIATE FOR "MINOR" ROADWAY.
- NOTE: DEVELOPER WISHES TO PHASE THE DEVELOPMENT AS SHOWN. TEMPORARY CUL-DE-SAC IS IN APPROPRIATE LOCATION.
- RESTRICTION NOTE: IT IS SPECIFICALLY PROHIBITED FOR ANY LOT OWNER TO ERECT A BRIDGE ACROSS THE JERICHO CREEK ABUTTING LAND OF LOT 1 & 2.
- NOTE: JERICHO CREEK BISECTS LOTS 1 & 2. FOR ALL PURPOSES THE CREEK DOES NOT CREATE TWO LOTS.
- NOTE THE DEVELOPER WILL ADOPT DEED RESTRICTIONS AS PART OF THE APPROVAL PROCESS.
- NOTE: PER SECTION 236.16(3)(A); A PUBLIC ACCESS TO JERICHO CREEK EXISTS AT CTH "LO" WHICH MEETS THIS PLATTING REGULATIONS AND WISCONSIN DEPARTMENT OF ADMINISTRATION.
- NOTE: DEVELOPER REQUESTS WAIVER OF SECTION 480.131 REGARDING PARK DEDICATION WITH CASH PAYMENT IN LIEU THERE OF.

SURVEYOR'S CERTIFICATE

STATE OF WISCONSIN
COUNTY OF WAUKESHA

WE, JAHNKE & JAHNKE ASSOCIATES, LLC., DO HEREBY CERTIFY THAT WE HAVE MADE HIS SURVEY AND THAT THE INFORMATION AS SHOWN ON THE ABOVE PLAT OF SURVEY IS TRUE AND CORRECT REPRESENTATION THEREOF.

John R. Stigler
JOHN R. STIGLER, WIS. REG. NO. S-1820
Dated this 28 day of Sept, 2020.
Revised this 13 day of Jan, 2021.



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(4) - Test Pits
(see Preliminary PLAT)

Project Number: 00542160
September 23, 2020

Professional Service Industries, Inc.
821 Corporate Court
Phone: (262) 521-2125
Fax: (262) 521-2471

Green Earth Realty/Camtec, Inc.
W309 S4860 Commercial Drive
North Prairie, WI

Attn: Diane Zak
Owner/Developer
dzak@green-geo.net

RE: Subsurface Exploration, and Infiltration and Seasonal High Groundwater Evaluation
Sprague Road Parcel
Sprague Road
Town of Eagle, Wisconsin

Dear Ms. Zak:

INTRODUCTION

In accordance with your request, Professional Service Industries, Inc. (PSI) has performed subsurface exploration activities to provide an evaluation of the soil and groundwater conditions, and to estimate the seasonal high groundwater elevations within proposed stormwater management areas on the above referenced site. An electronic copy of this report is being provided via e-mail. Hard copies will be provided upon request.

AUTHORIZATION

Authorization to perform these activities was in the form of a signed copy of PSI Proposal No. 0054-319645, dated August 20, 2020 to Green Earth Realty/Camtec, Inc. The general conditions for the performance of the work were referenced in the proposal. This report has been prepared on behalf of, and exclusively for Green Earth Realty/Camtec, Inc. The information contained in this report may not be relied upon by any other parties without the express written consent of PSI, and acceptance by such parties of PSI' General Conditions.

PURPOSE

The purpose of the subsurface exploration was to evaluate the soil and groundwater conditions encountered at selected locations within two proposed stormwater areas on the Subject Property in regard to potential infiltration, and to estimate the seasonal high groundwater elevations at these locations. Infiltration testing was not proposed as part of this project. The general locations of the test pits were chosen by the client. The type and other design details of the planned stormwater management areas for the development were not provided to PSI at the time of report preparation.





SCOPE

The scope of services included a site reconnaissance, subsurface exploration, a determination of soil characteristics by field observations, and an evaluation and analysis of the data obtained. The scope of the infiltration evaluation consisted of the excavation of four (4) test pits, to depths of about 15 feet below grade.

The field work for classification of the subgrade soils in accordance with the WDNR Technical Standard 1002 "Site Evaluation for Stormwater Infiltration" guidelines was performed to provide information for use by the basin design personnel when considering requirements of Chapter NR151 of the Wisconsin Administrative Code. The design of the proposed management devices was beyond the scope of services for this project. The location, size, or other structure details were not provided; nor were planned elevations or final surface grades.

SITE AND PROJECT DESCRIPTION

The Subject Property consists of an approximate 90-acre vacant parcel, which is currently planted with soybeans. It has a property identification of EGLT1826998004. It is located west of Sprague Road and south of Jericho Drive in the Town of Eagle, Wisconsin and is part of the Southwest ¼ of the Northeast ¼ and part of the Southeast ¼ of the Northwest ¼ of Section 25, Township 25 North, Range 17 East, Waukesha County. The latitude and longitude near the proposed stormwater basins are generally 42.866 N and 88.439 W, respectively. It is understood that it is proposed to develop the Subject Property with a residential subdivision. It is also understood that two (2) stormwater management areas are proposed as part of the development and are generally planned to be constructed in the southern portion of the Subject Property.

SOIL SURVEY MAP REVIEW

The U.S. Department of Agriculture *Soil Survey of Waukesha and Milwaukee Counties, Wisconsin*, dated July 1971, was reviewed for the pedological classification of the soils within the area of the project. The soil survey indicates that the Warsaw Loam (WeA) and the Lorenzo Loam (LyB2) soil series are generally present in the location of the proposed stormwater management areas. These soil series reportedly have a seasonal high water table at a depth greater than 5 feet below grade.

FIELD EXPLORATION AND LABORATORY TESTING

Field Exploration

Four (4) test pits (referenced by the client's engineer as B-101 through B-104) were excavated for this project. B-101 and B-102 (EL. 880.7± and EL.879.16±, respectively) were within the apparent area of the proposed western stormwater management area, while B-103 and B-104 (EL. 885.0± and EL. 884.3±, respectively) were performed near the proposed eastern stormwater management area. The elevations of the test pits were provided by the client's engineer. These test pits were performed for the evaluation of the subsurface soils and to estimate the potential infiltration rates and seasonal highwater tables of the encountered subsurface soils in these locations on the Subject Property.



The test pits were extended to a predetermined depth of about 15 feet below grade (EL. 864.2± and EL. 865.7± in the western area and EL. 869.3± and EL. 870± in the eastern area). The test pits were located by PSI utilizing existing site features and based upon a site diagram furnished by the client's engineer. The soil test pits were excavated by a subcontractor using a backhoe. Representative soil samples were obtained from the backhoe bucket when color, texture and/or moisture changes were observed. The approximate locations of the test pits are shown on the enclosed Test Pit Location Plan.

All soil samples were visually classified by a geologist in general accordance with the USDA Soil Textural Classification System. Copies of the Test Pit Logs are enclosed in the Appendix. Upon completion of the exploration activities and the evaluation procedures, the test pits were backfilled to the ground surface with the excavated soils. It must be recognized that the backfill was placed without compaction and therefore soft subgrade conditions will likely be encountered in the areas of the test pits.

DESCRIPTION OF SUBSURFACE CONDITIONS

General

A description of the subsurface conditions encountered at the test pit locations is shown on the Test Pit Logs. The soil stratification shown on the logs represents the soil conditions in the actual test pit locations at the time of the exploration. The lines of demarcation shown on the logs represent approximate boundaries between the various soil classifications. It must be recognized that the soil descriptions are considered representative for the specific test locations, and that variations may occur between and beyond the test locations. Soil depths, topsoil and layer thicknesses, and demarcation lines can be utilized for preliminary budgeting, but their use in construction calculations should not be expected to yield exact and final quantities. A summary of the major soil profile components is described in the following paragraphs.

Soil Conditions

The soils encountered at the surface of B-101 and B-102 consist of about 12 inches (EL. 879.7± and EL. 878.2±) and about 7 inches (EL. 884.4±) at B-103 of dark brown sandy loam topsoil. However, about 9 inches (EL. 883.6±) of gravelly sandy loam topsoil was encountered at test pit B-104. The soils beneath the topsoil in B-101 through B-103 consist of brown to light yellowish brown loamy sand to gravelly loamy sand to depths of about 1.5 to 4 feet below grade (EL. 875.2± to EL. 883.5±). Deeper soils encountered in B-102 consist of dark yellowish brown to yellowish brown sand extending to a depth of about 7 feet below grade (EL. 872.2±). The soils beneath the sand in B-102, beneath the loamy sand in B-101 and B-103 and the gravelly sandy loam topsoil in B-104 consist of very gravelly to extremely gravelly sand to a depth of about 13 feet below grade (EL. 872±) in B-103 and termination depth of about 15 feet below grade (EL. 864.2± to EL. 869.3±) in the remaining test pits. However, an approximate 12-inch layer of yellowish brown sandy loam is present at a depth of about 10.5 feet below grade (EL. 873.8±) in B-104. Sand is encountered below the very gravelly sand in B-103 and extends to the termination depth of about 15 feet below grade (EL. 870±).

Groundwater Observations

Groundwater observations were made during and upon completion of the excavation activities. No free water



was observed within any of the test pits. The groundwater table in the area of B-101 and B-102 is anticipated to be at a depth greater than 15 feet below grade (EL. 865.7± and EL. 864.2±, respectively) and at a depth greater than 15 feet below grade (EL. 870± and EL. 869.3±) in the area of B-103 and B-104, respectively. Very moist soils were observed in the upper portion of the sandy loam encountered in TP-4 at about 10.5 feet below grade (EL. 873.8±). However, saturated soils were not encountered within the sand soils beneath these sandy loam soils.

It must be recognized that groundwater levels fluctuate with time due to variations in seasonal precipitation, lateral drainage conditions, and soil permeability characteristics.

ESTIMATED DESIGN INFILTRATION RATES

The subgrade soils encountered in the test pits were classified in general accordance with the USDA Soil Textural Classification System. Estimated infiltration rates for various soil types are shown. Table 2 of the Site Evaluation for Stormwater Infiltration (1002) document, published in the Wisconsin Department of Natural Resources Conservation Practice Standards, are shown below:

Soil Texture ¹	Design Infiltration Rate Without Measurement Inches/hour
Coarse sand or coarser (COS)	3.60
Loamy coarse sand (LCOS)	3.60
Sand (S)	3.60
Loamy sand (LS)	1.63
Sandy loam (SL)	0.50
Loam (L)	0.24
Silt loam (Si, L)	0.13
Sandy clay loam (SCL)	0.11
Clay loam (CL)	0.03
Silty Clay loam (Si, CL)	0.04
Sandy clay (SC)	0.04
Silty clay (Si, C)	0.07
Clay (C)	0.07

¹Use sandy loam design infiltration rates for fine sand, very fine sand, and loamy fine sand soil textures.

NR-151 guidelines indicate infiltration rates shall be based on the least permeable soil horizon within 5 feet of the bottom elevation of the proposed infiltration system. Careful consideration by the infiltration device designer is required regarding size, inflow volumes, retained volumes, and other factors.



If Waukesha County will be reviewing the stormwater basin design and data, the Waukesha County Stormwater Management and Erosion Control Ordinance (Section 14), which is regulated by the Land Resource Division (LRD), refers to infiltration rates expressed in Natural Resource Conservation Services (NRCS) soils tables in the Milwaukee and Waukesha Counties Soil Survey (dated July 1971). The LRD indicated that if no actual permeability testing is performed utilizing a double-ring infiltrometer or equivalent method, the estimated infiltration rates must be based on the stated infiltration rates in the NRCS Soil Survey, which are shown below:

Soil Texture	Range of Design Infiltration Rates Without Field Measurement (Inches/Hour)
Sand and Gravel	>20.0
Sand	>20.0
Fine Sand	>20.0
Gravelly Loam	6.3-20.0
Loamy Sand	6.3-20.0
Sandy Loam	2.0-6.3
Silt Loam	0.63-2.0
Silty Clay Loam	0.63-2.0
Loam	0.63-2.0
Clay Loam	0.63-2.0
Sandy Clay Loam	0.63-2.0
Silty Clay	0.06-0.2
Clay	0.06-0.2

CONCLUSIONS OF INFILTRATION EVALUATION

The material encountered beneath the sandy loam topsoil in these test pits generally consisted of layers of gravelly loamy sand, sand, and gravelly to very gravelly sand to the termination depth of about 15 feet below grade (EL. 864.2± to EL. 870±). The exception was the 12-inch layer of sandy loam encountered at 10.5 to 11.5 feet below grade (EL. 873.8± to EL. 872.8±) in B-104.

The sandy loam soils have an estimated infiltration rate of 0.5 inches per hour, based on Table 2 above. This infiltration rate is less than 0.6 inches per hour. Based upon this and the classification of these soils, they may be exempt from the infiltration requirements of NR151.124. However, field verification testing of the actual in-situ infiltration rate for these materials is required per NR151.124 under NR151.124(4)(c)1 and under Step C5 of the Site Evaluation for Stormwater Infiltration document, to confirm they are exempt from the infiltration requirements. Utilizing the NRCS Soil Survey infiltration rates, the sandy loam soils may have a rate ranging from 2.0 to 6.3 inches per hour.

The loamy sand soils and sand soils have estimated infiltration rates of 1.63 and 3.6 inches per hour, respectively, based on Table 2 above. These infiltration rates are greater than 0.6 inches per hour. Based upon this and the classification of these soils, they are not exempt from the infiltration requirements of NR151.124 under NR151.124(4)(6)(2). Utilizing the NRCS Soil Survey infiltration rates, the loamy sand soils may have a rate ranging from 6.3 to 20 inches per hour, while the sand soils may have a rate greater than 20 inches per hour.

Dependent upon the proposed bottom elevations of the planned basins, it must be recognized that the evaluated areas and other areas of the site may be exempt or excluded from the infiltration requirements of NR151.124



under other provisions, such as defined in NR151.002(14r) due to the lack of a layer of sufficient thickness containing soils with sufficient fines content between the bottom of the basin and the groundwater. This layer of sufficient thickness containing soils with sufficient fines content is denoted by NR151.124(4)(b) as a “filtering layer”. As indicated in NR151.002(14r), a “filtering layer” is defined as a layer at least 3 feet thick, with at least 20 percent fines; or at least 5 feet thick, with at least 10 percent fines.

It must also be recognized that other areas of the site may be exempt or excluded from the infiltration requirements of NR151.124 under other provisions (dependent upon the final bottom elevation), such as NR151.124(4)(b), due to insufficient separation distance between the bottom of the basin and the seasonal high groundwater.

GENERAL STORMWATER MANAGEMENT AREA RECOMMENDATIONS

The preceding infiltration rate estimates are intended only for use in preliminary planning. Additional test pits in other areas of the basins or other areas of the site would be recommended to allow more detailed evaluation of subsurface conditions, including groundwater levels, and to provide more representative infiltration rates to be used in the final basin design. This may also include the performance of double ring infiltrometer testing. It is recommended that the bottom of the stormwater management area be observed by qualified geotechnical personnel at the time of construction to verify the soil types. The type of basin and intended use, such as being “wet” or “dry”, must be carefully considered when evaluating infiltration rates.

Care must be exercised in construction of basements in the vicinity of stormwater management basins. If basement floors are below the elevation of basin bottoms, lateral migration of water may result in increased sump pump activity. Also, granular backfill in utility trenches in the vicinity of stormwater management basins can act as conduits and carry water from basins into nearby basements. Therefore, consideration should be given to construction of clay collars around utility lines to prevent movement of water through the free draining backfill. Additionally, it must be recognized that some local building codes or municipal regulations require that basement floor elevations be a specified distance above the water level of nearby stormwater basins.

If the proposed basins are planned to infiltrate collected stormwater, the performance of such devices could be affected by other factors such as the existing soil density and compaction by construction equipment. It is recommended that construction equipment traffic to the bottom of the basins be minimized to reduce the potential for soil densification. A maintenance program must be developed to address the removal of sediment and or organic materials should they accumulate. Additionally, it is recommended that the basin design be performed by an experienced civil engineering firm, and that thorough review of applicable codes (especially NR151) and regulations be performed. Proper design and construction of sidewalls and berms will also be essential for proper device performance.

GENERAL COMMENTS

This limited evaluation has been prepared on the basis of the subsurface conditions encountered in the test pits discussed above. Preliminary recommendations presented herein are based on available soil information and test data collected. This study has been conducted in the manner consistent with that level of care ordinarily exercised by members of the profession currently practicing in the same locality under similar conditions. The findings and opinions contained herein have been promulgated in accordance with general accepted practices in the fields of soil mechanics



Project Number: 00542160
Sprague Road Parcel
Eagle, WI
September 23, 2020
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and engineering geology. No other representations, expressed or applied, and no warranty or guarantee is included or intended in this report.

After you have had the opportunity of reading this report, please call at any time with any questions or comments you may have. PSI appreciates the opportunity to be of service on this project.

Sincerely,

PROFESSIONAL SERVICE INDUSTRIES, INC.

Patrick J. Patterson, P.E., P.G.
Senior Engineer
Environmental Services
Certified Soil Tester #41631

Larry Raether, P.E.
Department Manager
Environmental Services

Attachments: Test Pit Location Diagram
Test Pit Logs
DSPS Form
WETS Table



ATTACHMENTS

TEST PIT LOG: B-101

Project: Sprague Road Parcel

Project No.: 00542160

Location: Sprague Road
Town of Eagle, Wisconsin

Date: August 31, 2020

Depth Below Surface/Elev. (ft)		VISUAL SOIL CLASSIFICATION Ground Surface Elevation: 880.7 ±	Sample No.	N (bpf)	Qp (tsf)	Qu (tsf)	MC (%)	PID (ppm)	Remarks
1	879.7	10YR, 3/3, Dark Brown, SANDY LOAM, 2. sbk, f, mfr -dry	1-HS	---	---	---	---	---	
		10YR, 5/4, Yellowish Brown, GRAVELLY LOAMY SAND, 2, abk, f, mvfr -moist	2-HS	---	---	---	---	---	
2	878.7	10YR, 6/3, Pale Brown, VERY GRAVELLY COARSE SAND, 0, sg, ml -moist	3-HS	---	---	---	---	---	
3	877.7	10YR, 6/3, Pale Brown, MEDIUM SAND, 1, pl, thin, mvfr -moist	4-HS	---	---	---	---	---	
4	876.7	10YR, 6/3, Pale Brown, VERY GRAVELLY COARSE SAND, 0, sg, ml -moist	5-HS	---	---	---	---	---	
5	875.7								
6	874.7								
7	873.7	10YR, 6/4, Light Yellowish Brown, VERY GRAVELLY MEDIUM SAND, 0, sg, ml -moist	6-HS	---	---	---	---	---	
8	872.7								
9	871.7								
10	870.7								
11	869.7								
12	868.7								
13	867.7	10YR, 5/4, Yellowish Brown, SAND, 0, sg, ml -moist	7-HS	---	---	---	---	---	
14	866.7								
15	865.7								
End of Test Pit: 15'									
Notes:									
Water Level / Caving Observations:				Additional Comments:					
Water Level During Excavation: none									
Water Level Upon Completion: none									

Lines of demarcation represent **approximate** boundaries between soil types. Variations may occur between sampling intervals and between test pit locations, and the transition may be gradual.



Intertek-PSI
821 Corporate Court
Waukesha, WI 53189

Tel (262) 521-2125
Fax (262) 521-2471
intertek.com/building

TEST PIT LOG: B-102

Project: Sprague Road Parcel

Project No.: 00542160

Location: Sprague Road
Town of Eagle, Wisconsin

Date: August 31, 2020

Depth Below Surface/Elev. (ft)	VISUAL SOIL CLASSIFICATION Ground Surface Elevation: 879.2 ±		Sample No.	N (bpf)	Qp (tsf)	Qu (tsf)	MC (%)	PID (ppm)	Remarks
1	878.2	10YR, 3/3, Dark Brown, SANDY LOAM, 2, sbk, f, mfr-dry	1-HS	---	---	---	---	---	
2	877.2	7.5YR, 4/6, Strong Brown, LOAMY SAND, 2, abk, f, mvfr-moist	2-HS	---	---	---	---	---	
3	876.2	7.5YR, 4/6, Strong Brown, VERY GRAVELLY SAND, 2, abk, f, mvfr-moist	3-HS	---	---	---	---	---	
4	875.2	10YR, 4/4, Dark Yellowish Brown, COARSE SAND, 0, sg, ml-moist	4-HS	---	---	---	---	---	
5	874.2								
6	873.2	10YR, 5/4, Yellowish Brown, MEDIUM SAND, 0, sg, ml-moist	5-HS	---	---	---	---	---	
7	872.2								
8	871.2								
9	870.2								
10	869.2								
11	868.2	10YR, 6/4, Light Yellowish Brown, VERY GRAVELLY COARSE SAND, 0, sg, ml-moist	6-HS	---	---	---	---	---	
12	867.2								
13	866.2								
14	865.2								
15	864.2								
End of Test Pit: 15'									
Notes:									
Water Level / Caving Observations:					Additional Comments:				
Water Level During Excavation: none									
Water Level Upon Completion: none									

Lines of demarcation represent **approximate** boundaries between soil types. Variations may occur between sampling intervals and between test pit locations, and the transition may be gradual.

TEST PIT LOG: B-103

Project: Sprague Road Parcel

Project No.: 00542160

Location: Sprague Road
Town of Eagle, Wisconsin

Date: August 31, 2020

Depth Below Surface/Elev. (ft)	VISUAL SOIL CLASSIFICATION Ground Surface Elevation: 885.0 ±	Sample No.	N (bpf)	Qp (tsf)	Qu (tsf)	MC (%)	PID (ppm)	Remarks
1	884.0	10YR, 3/3, Dark Brown, SANDY LOAM, 2, sbk, f, mfr -dry	1-HS	---	---	---	---	
2	883.0	7.5YR, 4/6, Strong Brown, LOAMY SAND, 2, abk, f, mvfr -moist	2-HS	---	---	---	---	
3	882.0							
4	881.0	10YR, 6/4, Light Yellowish Brown, VERY GRAVELLY COARSE SAND, 0, sg, ml -moist	3-HS	---	---	---	---	
5	880.0							
6	879.0							
7	878.0							
8	877.0							
9	876.0							
10	875.0	10YR, 5/4, Yellowish Brown, VERY GRAVELLY COARSE SAND, 0, sg, ml -moist	4-HS	---	---	---	---	
11	874.0							
12	873.0							
13	872.0							
14	871.0	10YR, 5/4, Yellowish Brown, VERY GRAVELLY MEDIUM SAND, 0, sg, ml -moist	5-HS	---	---	---	---	
15	870.0							
End of Test Pit: 15'								
Notes:								
Water Level / Caving Observations:			Additional Comments:					
Water Level During Excavation: none								
Water Level Upon Completion: none								

Lines of demarcation represent **approximate** boundaries between soil types. Variations may occur between sampling intervals and between test pit locations, and the transition may be gradual.



Intertek-PSI
821 Corporate Court
Waukesha, WI 53189

Tel (262) 521-2125
Fax (262) 521-2471
intertek.com/building

TEST PIT LOG: B-104

Project: Sprague Road Parcel

Project No.: 00542160

Location: Sprague Road
Town of Eagle, Wisconsin

Date: August 31, 2020

Depth Below Surface/Elev. (ft)		VISUAL SOIL CLASSIFICATION		Sample No.	N (bpf)	Qp (tsf)	Qu (tsf)	MC (%)	PID (ppm)	Remarks
		Ground Surface Elevation: 884.3 ±								
1	883.3	10YR, 3/3, Dark Brown, GRAVELLY SANDY LOAM, 2, sbk, f, mfr -dry		1-HS	---	---	---	---	---	
2	882.3	10YR, 6/4, Light Yellowish Brown, EXTREMELY GRAVELLY COARSE SAND, 0, sg, ml -moist		2-HS	---	---	---	---	---	
3	881.3									
4	880.3									
5	879.3									
6	878.3	10YR, 6/4, Light Yellowish Brown, VERY GRAVELLY COARSE SAND, 0, sg, ml -moist		3-HS	---	---	---	---		
7	877.3									
8	876.3	10YR, 5/4, Yellowish Brown, GRAVELLY MEDIUM SAND, 0, sg, ml -moist		4-HS	---	---	---	---		
9	875.3									
10	874.3	10YR, 5/4, Yellowish Brown, SANDY LOAM, 1, pl, thin, mvfr - moist to very moist		5-HS	---	---	---	---		
11	873.3									
12	872.3	10YR, 5/3, Brown, VERY GRAVELLY COARSE SAND, 0, sg, ml -moist		6-HS	---	---	---	---		
13	871.3									
14	870.3									
15	869.3									
End of Test Pit: 15'										
Notes:										
Water Level / Caving Observations:					Additional Comments:					
Water Level During Excavation: none										
Water Level Upon Completion: none										

Lines of demarcation represent **approximate** boundaries between soil types. Variations may occur between sampling intervals and between test pit locations, and the transition may be gradual.


SOIL EVALUATION - STORM

Page 1 of 2

In accordance with SPS 382.365 & 385, Wis. Adm. Code and WDNR Standard 1002

Attach complete site plan on paper not less than 8 1/2 x 11 inches in size. Plan must include, but not limited to: vertical and horizontal reference point (BM), direction and percent slope, scale or dimensions, north arrow, and BM referenced to nearest road.		County Waukesha	
Please print all information.		Parcel I.D. EGLT1826998004	
		Reviewed by: Date:	
Personal information you provide may be used for secondary purposes (Privacy Law, s. 15.04 (1) (m)).			
Property Owner Camtec, Inc.		Property Location SW 1/4 of SE 1/4 of NE 1/4 NW 1/4 S 25 T 25 N R 17 E	
Property Owner's Mailing Address W309 S4860 Commercial Drive		Lot # 1	Subd. Name or CSM# csm #11952
City North Prairie	State WI	Zip Code 53153	Phone Number
		<input type="checkbox"/> City <input type="checkbox"/> Village <input checked="" type="checkbox"/> Town	Nearest Road Sprague Road
Drainage area <input type="checkbox"/> sq. ft. <input type="checkbox"/> acres		Hydraulic Application Test Method:	
Optional: Test Site Suitable for (check all that apply) <input type="checkbox"/> Irrigation <input type="checkbox"/> Bioretention trench <input type="checkbox"/> Trench(es) <input type="checkbox"/> Rain Garden <input type="checkbox"/> Grassed swale <input type="checkbox"/> Reuse <input type="checkbox"/> Infiltration trench <input type="checkbox"/> SDS (> 15' wide) <input type="checkbox"/> Other		<input checked="" type="checkbox"/> Morphological Evaluation <input type="checkbox"/> Double Ring Infiltrometer <input type="checkbox"/> Other (specify)	
		Soil Moisture Date of Soil Borings: August 31, 2020 USDA-NRCS WETS Value: 13 <input type="checkbox"/> Dry = 1; <input checked="" type="checkbox"/> Normal = 2; <input type="checkbox"/> Wet = 3.	

1	Obs. #	<input type="checkbox"/> Boring <input checked="" type="checkbox"/> Pit	B-101		Ground surface elevation 880.7±							Elevation of limiting factor <865.7±	
Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	% Rock Frag.	% Fines	Hydraulic App. Rate Inches/Hr.			
1	0-12	10YR, 3/3		sl	2 f, sbk	mfr		<15		0.5 (2-6.3)			
2	12-18	10YR, 5/4		gr/s	2 f, abk	mvfr	di	>15		1.63 (6.3-20)			
3	18-30	10YR, 6/3		vygrs	0, sg	ml	cw	>35		3.6 (>20)			
4	30-36	10YR, 6/3		ms	1, thin, pl	mvfr	cw	<15		3.6 (>20)			
5	36-72	10YR, 6/3		vygrs	0, sg	ml	gi	>35		3.6 (>20)			
6	72-156	10YR, 6/4		vygrms	0, sg	ml	gi	>35		3.6 (>20)			
7	156-180	10YR, 5/4		s	0, sg	ml	gi	<15		3.6 (>20)			
Comments:													

2	Obs. #	<input type="checkbox"/> Boring <input checked="" type="checkbox"/> Pit	B-102	Ground surface elevation 879.16±							Elevation of limiting factor <864.2±	
Horizon	Depth In.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	% Rock Frag.	% Fines	Hydraulic App. Rate Inches/Hr.		
1	0-12	10YR, 3/3		sl	2,f,sbk	mfr		<15		0.5 (2-6.3)		
2	12-36	7.5YR, 4/6		ls	2,f,abk	mvfr	di	<15		1.63 (6.3-20)		
3	36-48	7.5YR, 4/6		vygrs	2,f,abk	mvfr	cw	>35		3.6 (>20)		
4	48-60	10YR, 4/4		cs	0,sg	ml	cw	<15		3.6 (>20)		
5	60-84	10YR, 5/4		ms	0,sg	ml	gi	<15		3.6 (>20)		
6	84-180	10YR, 6/4		vygrcs	0,sg	ml	gi	>35		3.6 (>20)		
Comments:												
CST/PSS Name (Please Print)				Signature				CST/PSS Number				
Patrick J. Patterson								41631				
Address				Date Evaluation Conducted				Telephone Number				
821 Corporate Court, Suite 102, Waukesha, WI 53189								262 521 2125				

SBD-10793 (R.01/17)

3	Obs. #	<input type="checkbox"/> Boring	B-103								
		<input checked="" type="checkbox"/> Pit	Ground surface elevation 885.0±		Elevation of limiting factor <870±						
Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	% Rock Frag.	% Fines	Hydraulic App. Rate Inches/Hr.	
1	0-7	10YR, 3/3		sl	2,f,sbk	mfr		<15		0.5 (2-6.3)	
2	7-18	7.5YR, 4/6		ls	2,f,abk	mvfr	di	<15		1.63 (6.3-20)	
3	18-84	10YR, 6/4		vygrcs	0,sg	ml	cw	>35		3.6 (>20)	
4	84-156	10YR, 5/4		vygrcs	0,sg	ml	cw	>35		3.6 (>20)	
5	156-180	10YR, 5/4		vygrms	0,sg	ml	gi	>35		3.6 (>20)	
Comments:											

4	Obs. #	<input type="checkbox"/> Boring	B-104								
		<input checked="" type="checkbox"/> Pit	Ground surface elevation 884.3±		Elevation of limiting factor 873.8±						
Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	% Rock Frag.	% Fines	Hydraulic App. Rate Inches/Hr.	
1	0-9	10YR, 3/3		grsl	2,f,sbk	mfr		<15		0.5 (2-6.3)	
2	9-96	10YR, 6/4		exgrcs	0,sg	ml	di	>60		3.6 (>20)	
3	96-114	10YR, 6/4		vygrcs	0,sg	ml	cw	>35		3.6 (>20)	
4	114-126	10YR, 5/4		grms	0,sg	ml	cw	>15		3.6 (>20)	
5	126-138	10YR, 5/4		sl	1,thin,pl	mvfr	as	<15		0.5 (2-6.3)	
6	138-180	10YR, 5/3		vygrcs	0,sg	ml	as	>35		3.6 (>20)	
Comments:											

Use: "30% chance will have more/less than X" for "3yrs.in 10 less/more than"

	Long-Term Rainfall Records				Current Year Rainfall	Condition, dry, wet, normal	Condition Value	Month Weght Value	Product of previous two
	3 yrs. In 10 less than	Average	3 yrs. In 10 more than						
1st prior month	April	2.81	3.94	4.66	5.27	wet	3	3	9
2nd prior month	March	3.06	4.91	5.93	2.82	dry	1	2	2
3rd prior month	February	3.9	4.67	5.51	4.68	normal	2	1	2
								Sum	13

Note: If sum is
 6 to 9 Then prior period has been drier than normal
 10 to 14 Then period has been normal
 15 to 18 Then period has been wetter than normal

Condition Value:
 Dry (D) 1
 Normal (N) 2
 Wet (W)) 3

Note: Long-Term Records and rainfall from Oconomowoc WWTP station.