

FREY PIVOT SERVICE

SEPTEMBER 30, 2025

WISH-119641

CUSTOMER : ROBBI SMITH

LINDSAY 9500 - 30
15 TOWER - 2589.71 FT
SYSTEM 1600 GPM @ 52 PSI

LEGAL : JOHANSON 1
P.O. NO. : S/N LB5564

SENNINGER UP3 XCEL TOP
SENNINGER 10 PSI REGULATORS
NELSON SR-100 .75 TB
ELEVATION 12 FT UP, 12 FT DOWN

77 COUNTY ROAD 40
STAPLETON, NEBRASKA 69163
(308)636-2327

WARRANTY

WATER APPLICATION UNIFORMITY OBTAINED WITH THIS SYSTEM CAN BE ADVERSELY AFFECTED BY MANY VARIABLES INCLUDING THE IMPROPER MAKEUP OR INSTALLATION OF THE SPRINKLER OR SPRAY NOZZLE PACKAGE, OBSTRUCTED NOZZLES, MAINTAINING INCORRECT PIVOT PRESSURE, UNFAVORABLE CLIMATIC CONDITIONS, TIGHT AND/OR SLOPING SOILS, IMPROPER END GUN ARC SETTINGS, ERRATIC AND IMPROPER OPERATING SPEED OF THE SYSTEM, POOR QUALITY OF WATER WITH ABRASIVES, CORROSIVES, AND/OR SOLIDS WHICH CAN CAUSE PLUGGING AND JAMMING, AS WELL AS INHERENT VARIABLES IN THE MANY COMPONENTS COMPRISING THE SYSTEM. THEREFORE WESTERN IRRIGATION SUPPLY HOUSE, INC., MAKES NO WARRANTY AS TO THE UNIFORMITY OF COVERAGE OBTAINED FROM THIS WATER APPLICATION PRINTOUT OTHER THAN ITS MATHEMATICAL ACCURACY.

IT IS THE RESPONSIBILITY OF THE END USER TO DETERMINE IF ANY INCOMPATIBILITY EXISTS BETWEEN THE WATER DISTRIBUTION DEVICES AND THE CROP, THE SOIL, AND THE PHYSICAL STRUCTURE OF THE MECHANICAL MOVE SYSTEM. WESTERN IRRIGATION SUPPLY HOUSE, INC., THEREFORE, DISCLAIMS ANY LIABILITY FOR DAMAGES DUE TO FAILURE OF THE SYSTEM TO PERFORM AS CONTEMPLATED.

FIGURES PRESENTED ON THIS COMPUTER PRINTOUT ARE BASED ON THE FOLLOWING:

1. DATA FURNISHED TO WESTERN IRRIGATION SUPPLY HOUSE, INC., ON PIPE LENGTH, DIAMETER, SURFACE FINISH, OUTLET SPACINGS, WATER FLOW, PIVOT PRESSURE AND ALL OTHER APPLICABLE INFORMATION.
2. THERE IS 100% WATER APPLICATION EFFICIENCY (ZERO WIND VELOCITY AND NO EVAPORATION).
3. PIVOT PRESSURE IS MEASURED ON THE MAIN HORIZONTAL DISTRIBUTION PIPE JUST AFTER THE LAST ELBOW.
4. MAIN PIPE PRESSURE IS CALCULATED AS IF THE PIVOT IS ALWAYS ON LEVEL GROUND.
5. SPRINKLER OR SPRAY NOZZLE BASE PRESSURE MAY BE LESS THAN MAIN LINE PIPE PRESSURE DUE TO THE USE OF PRESSURE REGULATORS. WHERE DROP PIPES ARE USED THE STATIC HEAD IS ADDED TO AND FRICTION LOSS IS SUBTRACTED FROM THE MAIN LINE PIPE PRESSURE TO DETERMINE INLET PSI. REGULATORS ARE CONSIDERED MOUNTED AT THE SAME HEIGHT AS THE SPRINKLING DEVICE UNLESS NOTED.

LINDSAY 9500 - 30

SEPTEMBER 30, 2025

WISH-119641

DEALER

FREY PIVOT SERVICE
77 COUNTY ROAD 40
STAPLETON, NEBRASKA 69163

IRRIGATOR

ROBBI SMITH
JOHANSON 1
S/N LB5564

TOTAL TARGET GPM	1600.00	FRICTION FACTOR USED	138	SPANS	LENGTH	PIPE I.D.
TOP OF PIVOT PRESSURE	52.00	TOTAL LENGTH	2589.71	1	181.60	7.782
ENDGUN TARGET GPM	127.40	NUMBER OF TOWERS	15	8	179.00	7.782
NUMBER OF OUTLETS	1054	NUMBER OF SPRINKLERS	261	2	157.04	7.782
SENNINGER UP3 XCEL TOP				4	157.04	6.395
SENNINGER PSR-2 10 PSI SERIES REGULATORS				OH	33.87	5.369

ELEVATION IS 12 FT UP AND 12 FT DOWN

CAUTIONS AND WARNINGS

1. Over watering at beginning of system due to practical limitations on smallest nozzle sizes available and/or allowable for proper operation.
2. This system designed for minimum pressure. Failure to deliver indicated pressure at the top of pivot point will adversely affect regulator and/or sprinkler/spray performance. Elevations, pipe sizes and type of drop pipe must be as shown.

OUTLET NO.	LAST OUTLET	DISTANCE TO PIVOT	GPM NEED	GPM DEL.	PIPE PSI	NOZZLE PSI	SPRINKLER LABEL AND NOZZLE SIZE	SPRK NO.	REG SIZE	PLUG NO.
49		120.35	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	42
50		122.85	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	43
51		125.27	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	44
52	14.68	127.69	0.82	0.85	48.75	11.40	XCEL TOP UP3 6 GOLD	8	SPSR2-10	
53		130.19	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	45
54		132.69	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	46
55		135.02	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	47
56		137.50	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	48
57		139.83	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	49
58	14.64	142.33	0.91	0.85	48.66	11.40	XCEL TOP UP3 6 GOLD	9	SPSR2-10	
59		144.83	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	50
60		147.25	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	51
61		149.67	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	52
62		152.17	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	53
63		154.59	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	54
64	14.68	157.01	1.01	1.00	48.64	11.40	XCEL TOP UP3 6.5 GOLD	10	SPSR2-10	
65		159.51	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	55
66		161.93	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	56
67		164.35	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	57
68		166.85	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	58
69		169.27	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	59
70	14.68	171.69	1.03	1.00	48.68	11.40	XCEL TOP UP3 6.5 GOLD	11	SPSR2-10	
71		174.19	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	60
72		176.69	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	61
73		179.02	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	62
TOWER 1	181.60	181.60	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	63
74		181.92	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	
75	12.81	184.50	1.01	1.00	48.43	11.40	XCEL TOP UP3 6.5 GOLD	12	SPSR2-10	
76		186.83	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	64
77		189.33	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	65
78		191.83	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	66
79		194.25	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	67
80	12.17	196.67	1.05	1.00	48.04	11.40	XCEL TOP UP3 6.5 GOLD	13	SPSR2-10	
81		199.17	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	68
82		201.59	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	69
83		204.01	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	70
84		206.51	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	71
85	12.26	208.93	1.12	1.16	47.56	11.40	XCEL TOP UP3 7 LIME	14	SPSR2-10	
86		211.35	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	72
87		213.85	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	73
88		216.27	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	74
89		218.69	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	75
90	12.26	221.19	1.18	1.16	47.12	11.40	XCEL TOP UP3 7 LIME	15	SPSR2-10	
91		223.69	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	76
92		226.02	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	77
93		228.50	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	78
94		230.83	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	79
95	12.14	233.33	1.25	1.16	46.73	11.40	XCEL TOP UP3 7 LIME	16	SPSR2-10	

OUTLET NO.	LAST OUTLET	DISTANCE TO PIVOT	GPM NEED	GPM DEL.	PIPE PSI	NOZZLE PSI	SPRINKLER LABEL AND NOZZLE SIZE	SPRK NO.	REG SIZE	PLUG NO.
144		353.19	-	-	-	-	-	-	-	119
145	12.34	355.69	1.95	1.93	45.18	11.40	XCEL TOP UP3 9 GREY	26	SPSR2-10	
146		358.02	-	-	-	-	-	-	-	120
TOWER 2	179.00	360.60								
147		360.92	-	-	-	-	-	-	-	121
148		363.50	-	-	-	-	-	-	-	122
149		365.83	-	-	-	-	-	-	-	123
150	12.64	368.33	2.01	1.93	44.95	11.40	XCEL TOP UP3 9 GREY	27	SPSR2-10	
151		370.83	-	-	-	-	-	-	-	124
152		373.25	-	-	-	-	-	-	-	125
153		375.67	-	-	-	-	-	-	-	126
154		378.17	-	-	-	-	-	-	-	127
155	12.26	380.59	2.05	2.16	44.45	11.38	XCEL TOP UP3 9.5 GREY	28	SPSR2-10	
156		383.01	-	-	-	-	-	-	-	128
157		385.51	-	-	-	-	-	-	-	129
158		387.93	-	-	-	-	-	-	-	130
159		390.35	-	-	-	-	-	-	-	131
160	12.26	392.85	2.10	2.16	43.99	11.38	XCEL TOP UP3 9.5 GREY	29	SPSR2-10	
161		395.27	-	-	-	-	-	-	-	132
162		397.69	-	-	-	-	-	-	-	133
163		400.19	-	-	-	-	-	-	-	134
164		402.69	-	-	-	-	-	-	-	135
165	12.17	405.02	2.17	2.16	43.58	11.38	XCEL TOP UP3 9.5 GREY	30	SPSR2-10	
166		407.50	-	-	-	-	-	-	-	136
167		409.83	-	-	-	-	-	-	-	137
168		412.33	-	-	-	-	-	-	-	138
169		414.83	-	-	-	-	-	-	-	139
170	12.23	417.25	2.24	2.16	43.22	11.38	XCEL TOP UP3 9.5 GREY	31	SPSR2-10	
171		419.67	-	-	-	-	-	-	-	140
172		422.17	-	-	-	-	-	-	-	141
173		424.59	-	-	-	-	-	-	-	142
174		427.01	-	-	-	-	-	-	-	143
175	12.26	429.51	2.30	2.39	42.89	11.36	XCEL TOP UP3 10 TURQUOISE	32	SPSR2-10	
176		431.93	-	-	-	-	-	-	-	144
177		434.35	-	-	-	-	-	-	-	145
178		436.85	-	-	-	-	-	-	-	146
179		439.27	-	-	-	-	-	-	-	147
180	12.18	441.69	2.35	2.39	42.62	11.36	XCEL TOP UP3 10 TURQUOISE	33	SPSR2-10	
181		444.19	-	-	-	-	-	-	-	148
182		446.69	-	-	-	-	-	-	-	149
183		449.02	-	-	-	-	-	-	-	150
184		451.50	-	-	-	-	-	-	-	151
185	12.14	453.83	2.43	2.39	42.39	11.36	XCEL TOP UP3 10 TURQUOISE	34	SPSR2-10	
186		456.33	-	-	-	-	-	-	-	152
187		458.83	-	-	-	-	-	-	-	153
188		461.25	-	-	-	-	-	-	-	154
189		463.67	-	-	-	-	-	-	-	155
190	12.34	466.17	2.50	2.39	42.20	11.36	XCEL TOP UP3 10 TURQUOISE	35	SPSR2-10	

OUTLET NO.	LAST OUTLET	DISTANCE TO PIVOT	GPM NEED	GPM DEL.	PIPE PSI	NOZZLE PSI	SPRINKLER LABEL AND NOZZLE SIZE	SPRK NO.	REG SIZE	PLUG NO.
286		701.35	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	229
287		703.85	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	230
288	9.76	706.27	3.02	2.89	38.83	11.31	XCEL TOP UP3 11 YELLOW	58	SPSR2-10	- - - - -
289		708.69	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	231
290		711.19	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	232
291		713.69	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	233
292	9.75	716.02	3.15	3.15	38.72	11.28	XCEL TOP UP3 11.5 YELLOW	59	SPSR2-10	- - - - -
TOWER 4	179.00	718.60	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -
293		718.92	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	234
294		721.50	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	235
295		723.83	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	236
296	10.31	726.33	3.21	3.15	38.55	11.28	XCEL TOP UP3 11.5 YELLOW	60	SPSR2-10	- - - - -
297		728.83	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	237
298		731.25	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	238
299		733.67	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	239
300	9.84	736.17	3.16	3.15	38.17	11.28	XCEL TOP UP3 11.5 YELLOW	61	SPSR2-10	- - - - -
301		738.59	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	240
302		741.01	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	241
303		743.51	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	242
304	9.76	745.93	3.19	3.15	37.81	11.28	XCEL TOP UP3 11.5 YELLOW	62	SPSR2-10	- - - - -
305		748.35	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	243
306		750.85	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	244
307		753.27	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	245
308	9.76	755.69	3.24	3.16	37.48	11.28	XCEL TOP UP3 11.5 YELLOW	63	SPSR2-10	- - - - -
309		758.19	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	246
310		760.69	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	247
311		763.02	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	248
312	9.81	765.50	3.28	3.16	37.18	11.28	XCEL TOP UP3 11.5 YELLOW	64	SPSR2-10	- - - - -
313		767.83	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	249
314		770.33	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	250
315		772.83	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	251
316	9.75	775.25	3.32	3.44	36.91	11.26	XCEL TOP UP3 12 RED	65	SPSR2-10	- - - - -
317		777.67	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	252
318		780.17	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	253
319		782.59	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	254
320	9.76	785.01	3.37	3.44	36.67	11.26	XCEL TOP UP3 12 RED	66	SPSR2-10	- - - - -
321		787.51	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	255
322		789.93	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	256
323		792.35	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	257
324	9.84	794.85	3.43	3.44	36.46	11.26	XCEL TOP UP3 12 RED	67	SPSR2-10	- - - - -
325		797.27	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	258
326		799.69	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	259
327		802.19	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	260
328	9.84	804.69	3.44	3.44	36.28	11.26	XCEL TOP UP3 12 RED	68	SPSR2-10	- - - - -
329		807.02	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	261
330		809.50	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	262
331		811.83	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	263
332	9.64	814.33	3.48	3.44	36.13	11.26	XCEL TOP UP3 12 RED	69	SPSR2-10	- - - - -

OUTLET NO.	LAST OUTLET	DISTANCE TO PIVOT	GPM NEED	GPM DEL.	PIPE PSI	NOZZLE PSI	SPRINKLER LABEL AND NOZZLE SIZE	SPRK NO.	REG SIZE	PLUG NO.
428		9.76	1049.59	4.49	4.34	33.12	11.17 XCEL TOP UP3 13.5 WHITE	93	SPSR2-10	
429			1052.01	-	-	-	- - - - -	-	-	336
430			1054.51	-	-	-	- - - - -	-	-	337
431			1056.93	-	-	-	- - - - -	-	-	338
432	9.76		1059.35	4.55	4.66	33.18	11.13 XCEL TOP UP3 14 BLUE	94	SPSR2-10	
433			1061.85	-	-	-	- - - - -	-	-	339
434			1064.27	-	-	-	- - - - -	-	-	340
435			1066.69	-	-	-	- - - - -	-	-	341
436	9.84		1069.19	4.72	4.66	33.21	11.13 XCEL TOP UP3 14 BLUE	95	SPSR2-10	
437			1071.69	-	-	-	- - - - -	-	-	342
438			1074.02	-	-	-	- - - - -	-	-	343
TOWER 6		179.00	1076.60							
439			1076.92	-	-	-	- - - - -	-	-	344
440	10.31		1079.50	4.75	4.66	33.07	11.13 XCEL TOP UP3 14 BLUE	96	SPSR2-10	
441			1081.83	-	-	-	- - - - -	-	-	345
442			1084.33	-	-	-	- - - - -	-	-	346
443			1086.83	-	-	-	- - - - -	-	-	347
444	9.75		1089.25	4.66	4.66	32.82	11.13 XCEL TOP UP3 14 BLUE	97	SPSR2-10	
445			1091.67	-	-	-	- - - - -	-	-	348
446			1094.17	-	-	-	- - - - -	-	-	349
447			1096.59	-	-	-	- - - - -	-	-	350
448	9.76		1099.01	4.72	4.66	32.48	11.13 XCEL TOP UP3 14 BLUE	98	SPSR2-10	
449			1101.51	-	-	-	- - - - -	-	-	351
450			1103.93	-	-	-	- - - - -	-	-	352
451			1106.35	-	-	-	- - - - -	-	-	353
452	9.84		1108.85	4.79	4.66	32.16	11.13 XCEL TOP UP3 14 BLUE	99	SPSR2-10	
453			1111.27	-	-	-	- - - - -	-	-	354
454			1113.69	-	-	-	- - - - -	-	-	355
455			1116.19	-	-	-	- - - - -	-	-	356
456	9.84		1118.69	4.78	4.66	31.88	11.13 XCEL TOP UP3 14 BLUE	100	SPSR2-10	
457			1121.02	-	-	-	- - - - -	-	-	357
458			1123.50	-	-	-	- - - - -	-	-	358
459			1125.83	-	-	-	- - - - -	-	-	359
460	9.64		1128.33	4.82	4.66	31.62	11.13 XCEL TOP UP3 14 BLUE	101	SPSR2-10	
461			1130.83	-	-	-	- - - - -	-	-	360
462			1133.25	-	-	-	- - - - -	-	-	361
463			1135.67	-	-	-	- - - - -	-	-	362
464	9.84		1138.17	4.89	4.99	31.40	11.10 XCEL TOP UP3 14.5 BLUE	102	SPSR2-10	
465			1140.59	-	-	-	- - - - -	-	-	363
466			1143.01	-	-	-	- - - - -	-	-	364
467			1145.51	-	-	-	- - - - -	-	-	365
468	9.76		1147.93	4.91	4.99	31.20	11.10 XCEL TOP UP3 14.5 BLUE	103	SPSR2-10	
469			1150.35	-	-	-	- - - - -	-	-	366
470			1152.85	-	-	-	- - - - -	-	-	367
471			1155.27	-	-	-	- - - - -	-	-	368
472	9.76		1157.69	4.97	4.99	31.03	11.10 XCEL TOP UP3 14.5 BLUE	104	SPSR2-10	
473			1160.19	-	-	-	- - - - -	-	-	369
474			1162.69	-	-	-	- - - - -	-	-	370

OUTLET NO.	LAST OUTLET	DISTANCE TO PIVOT	GPM NEED	GPM DEL.	PIPE PSI	NOZZLE PSI	SPRINKLER LABEL AND NOZZLE SIZE	SPRK NO.	REG SIZE	PLUG NO.
570		1397.83	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	442
571		1400.25	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	443
572	9.84	1402.67	6.05	6.04	28.58	10.91	XCEL TOP UP3 16 ORANGE	129	SPSR2-10	
573		1405.17	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	444
574		1407.59	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	445
575		1410.01	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	446
576	9.84	1412.51	6.07	6.04	28.66	10.91	XCEL TOP UP3 16 ORANGE	130	SPSR2-10	
577		1414.93	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	447
578		1417.35	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	448
579		1419.85	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	449
580	9.76	1422.27	6.08	6.04	28.77	10.91	XCEL TOP UP3 16 ORANGE	131	SPSR2-10	
581		1424.69	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	450
582		1427.19	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	451
583		1429.69	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	452
584	9.75	1432.02	6.30	6.40	28.72	10.85	XCEL TOP UP3 16.5 ORANGE	132	SPSR2-10	
TOWER 8	179.00	1434.60	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	
585		1434.92	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	453
586		1437.50	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	454
587		1439.83	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	455
588	10.31	1442.33	6.37	6.41	28.62	10.85	XCEL TOP UP3 16.5 ORANGE	133	SPSR2-10	
589		1444.83	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	456
590		1447.25	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	457
591		1449.67	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	458
592	9.84	1452.17	6.24	6.40	28.30	10.85	XCEL TOP UP3 16.5 ORANGE	134	SPSR2-10	
593		1454.59	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	459
594		1457.01	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	460
595		1459.51	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	461
596	9.76	1461.93	6.26	6.40	28.00	10.85	XCEL TOP UP3 16.5 ORANGE	135	SPSR2-10	
597		1464.35	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	462
598		1466.85	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	463
599		1469.27	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	464
600	9.76	1471.69	6.31	6.40	27.74	10.85	XCEL TOP UP3 16.5 ORANGE	136	SPSR2-10	
601		1474.19	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	465
602		1476.69	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	466
603		1479.02	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	467
604	9.81	1481.50	6.35	6.41	27.50	10.85	XCEL TOP UP3 16.5 ORANGE	137	SPSR2-10	
605		1483.83	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	468
606		1486.33	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	469
607		1488.83	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	470
608	9.75	1491.25	6.38	6.41	27.30	10.85	XCEL TOP UP3 16.5 ORANGE	138	SPSR2-10	
609		1493.67	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	471
610		1496.17	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	472
611		1498.59	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	473
612	9.76	1501.01	6.45	6.41	27.12	10.85	XCEL TOP UP3 16.5 ORANGE	139	SPSR2-10	
613		1503.51	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	474
614		1505.93	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	475
615		1508.35	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	476
616	9.84	1510.85	6.52	6.41	26.98	10.85	XCEL TOP UP3 16.5 ORANGE	140	SPSR2-10	

OUTLET NO.	LAST OUTLET	DISTANCE TO PIVOT	GPM NEED	GPM DEL.	PIPE PSI	NOZZLE PSI	SPRINKLER LABEL AND NOZZLE SIZE	SPRK NO.	REG SIZE	PLUG NO.
664		9.84	1628.67	7.02	7.16	26.66	10.71 XCEL TOP UP3 17.5 DK GREEN	152	SPSR2-10	
665			1631.17	-	-	-	- - - - -	-	-	513
666			1633.59	-	-	-	- - - - -	-	-	514
667			1636.01	-	-	-	- - - - -	-	-	515
668	9.84		1638.51	7.04	7.16	26.35	10.71 XCEL TOP UP3 17.5 DK GREEN	153	SPSR2-10	
669			1640.93	-	-	-	- - - - -	-	-	516
670			1643.35	-	-	-	- - - - -	-	-	517
671			1645.85	-	-	-	- - - - -	-	-	518
672	9.76		1648.27	7.04	7.16	26.09	10.71 XCEL TOP UP3 17.5 DK GREEN	154	SPSR2-10	
673			1650.69	-	-	-	- - - - -	-	-	519
674			1653.19	-	-	-	- - - - -	-	-	520
675			1655.69	-	-	-	- - - - -	-	-	521
676	9.75		1658.02	7.11	7.16	25.87	10.71 XCEL TOP UP3 17.5 DK GREEN	155	SPSR2-10	
677			1660.51	-	-	-	- - - - -	-	-	522
678			1662.84	-	-	-	- - - - -	-	-	523
679			1665.34	-	-	-	- - - - -	-	-	524
680	9.82		1667.84	7.18	7.16	25.68	10.71 XCEL TOP UP3 17.5 DK GREEN	156	SPSR2-10	
681			1670.26	-	-	-	- - - - -	-	-	525
682			1672.68	-	-	-	- - - - -	-	-	526
683			1675.18	-	-	-	- - - - -	-	-	527
684	9.84		1677.68	7.18	7.16	25.53	10.71 XCEL TOP UP3 17.5 DK GREEN	157	SPSR2-10	
685			1680.01	-	-	-	- - - - -	-	-	528
686			1682.54	-	-	-	- - - - -	-	-	529
687			1684.87	-	-	-	- - - - -	-	-	530
688	9.69		1687.37	7.22	7.16	25.42	10.71 XCEL TOP UP3 17.5 DK GREEN	158	SPSR2-10	
689			1689.87	-	-	-	- - - - -	-	-	531
690			1692.29	-	-	-	- - - - -	-	-	532
691			1694.71	-	-	-	- - - - -	-	-	533
692	9.84		1697.21	7.29	7.16	25.35	10.71 XCEL TOP UP3 17.5 DK GREEN	159	SPSR2-10	
693			1699.63	-	-	-	- - - - -	-	-	534
694			1702.05	-	-	-	- - - - -	-	-	535
695			1704.55	-	-	-	- - - - -	-	-	536
696	9.76		1706.97	7.30	7.16	25.32	10.71 XCEL TOP UP3 17.5 DK GREEN	160	SPSR2-10	
697			1709.39	-	-	-	- - - - -	-	-	537
698			1711.89	-	-	-	- - - - -	-	-	538
699			1714.31	-	-	-	- - - - -	-	-	539
700	9.76		1716.73	7.36	7.55	25.32	10.64 XCEL TOP UP3 18 PURPLE	161	SPSR2-10	
701			1719.23	-	-	-	- - - - -	-	-	540
702			1721.73	-	-	-	- - - - -	-	-	541
703			1724.06	-	-	-	- - - - -	-	-	542
704	9.81		1726.54	7.40	7.55	25.37	10.64 XCEL TOP UP3 18 PURPLE	162	SPSR2-10	
705			1728.87	-	-	-	- - - - -	-	-	543
706			1731.37	-	-	-	- - - - -	-	-	544
707			1733.87	-	-	-	- - - - -	-	-	545
708	9.75		1736.29	7.42	7.55	25.45	10.64 XCEL TOP UP3 18 PURPLE	163	SPSR2-10	
709			1738.71	-	-	-	- - - - -	-	-	546
710			1741.21	-	-	-	- - - - -	-	-	547
711			1743.63	-	-	-	- - - - -	-	-	548

OUTLET NO.	LAST OUTLET	DISTANCE TO PIVOT	GPM NEED	GPM DEL.	PIPE PSI	NOZZLE PSI	SPRINKLER LABEL AND NOZZLE SIZE	SPRK NO.	REG SIZE	PLUG NO.
759		1861.59	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	584
760	9.76	1864.01	7.97	7.95	24.27	10.57	XCEL TOP UP3 18.5 PURPLE	176	SPSR2-10	
761		1866.43	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	585
762		1868.93	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	586
763		1871.35	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	587
764	9.76	1873.77	8.03	7.95	24.29	10.57	XCEL TOP UP3 18.5 PURPLE	177	SPSR2-10	
765		1876.27	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	588
766		1878.77	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	589
767		1881.10	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	590
768	9.81	1883.58	8.07	7.95	24.35	10.57	XCEL TOP UP3 18.5 PURPLE	178	SPSR2-10	
769		1885.91	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	591
770		1888.41	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	592
771		1890.91	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	593
772	9.75	1893.33	8.09	7.95	24.45	10.57	XCEL TOP UP3 18.5 PURPLE	179	SPSR2-10	
773		1895.75	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	594
774		1898.25	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	595
775		1900.67	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	596
776	9.76	1903.09	8.17	8.35	24.59	10.49	XCEL TOP UP3 19 BLACK	180	SPSR2-10	
777		1905.59	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	597
778		1908.01	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	598
779		1910.43	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	599
780	9.84	1912.93	8.25	8.35	24.76	10.50	XCEL TOP UP3 19 BLACK	181	SPSR2-10	
781		1915.35	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	600
782		1917.77	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	601
783		1920.27	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	602
784	9.84	1922.77	8.41	8.35	24.87	10.50	XCEL TOP UP3 19 BLACK	182	SPSR2-10	
785		1925.10	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	603
TOWER 11	157.04	1927.68	PIPE ID CHANGES FROM 7.782 TO 6.395							
786		1928.00	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	604
787		1930.58	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	605
788	10.14	1932.91	8.46	8.35	24.73	10.50	XCEL TOP UP3 19 BLACK	183	SPSR2-10	
789		1935.41	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	606
790		1937.91	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	607
791		1940.33	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	608
792	9.84	1942.75	8.38	8.35	24.40	10.50	XCEL TOP UP3 19 BLACK	184	SPSR2-10	
793		1945.25	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	609
794		1947.67	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	610
795		1950.09	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	611
796	9.84	1952.59	8.38	8.35	24.05	10.50	XCEL TOP UP3 19 BLACK	185	SPSR2-10	
797		1955.01	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	612
798		1957.43	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	613
799		1959.93	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	614
800	9.76	1962.35	8.39	8.35	23.74	10.50	XCEL TOP UP3 19 BLACK	186	SPSR2-10	
801		1964.77	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	615
802		1967.27	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	616
803		1969.77	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	617
804	9.75	1972.10	8.46	8.35	23.48	10.50	XCEL TOP UP3 19 BLACK	187	SPSR2-10	

OUTLET NO.	LAST OUTLET	DISTANCE TO PIVOT	GPM NEED	GPM DEL.	PIPE PSI	NOZZLE PSI	SPRINKLER LABEL AND NOZZLE SIZE	SPRK NO.	REG SIZE	PLUG NO.
900		9.75	2207.41	9.44	9.60	21.46	10.27 XCEL TOP UP3 20.5 DK TURQ	211	SPSR2-10	
901			2209.83	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	690
902			2212.33	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	691
903			2214.75	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	692
904	9.76		2217.17	9.52	9.60	21.59	10.27 XCEL TOP UP3 20.5 DK TURQ	212	SPSR2-10	
905			2219.67	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	693
906			2222.09	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	694
907			2224.51	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	695
908	9.84		2227.01	9.60	9.60	21.76	10.27 XCEL TOP UP3 20.5 DK TURQ	213	SPSR2-10	
909			2229.43	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	696
910			2231.85	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	697
911			2234.35	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	698
912	9.84		2236.85	9.79	9.60	21.86	10.28 XCEL TOP UP3 20.5 DK TURQ	214	SPSR2-10	
913			2239.18	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	699
TOWER 13		157.04	2241.76							
914			2242.08	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	700
915			2244.66	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	701
916	10.14		2246.99	8.64	8.76	21.80	10.42 XCEL TOP UP3 19.5 BLACK	215	SPSR2-10	
917			2249.49	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	702
918			2251.99	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	703
919	7.42		2254.41	7.29	7.16	21.61	10.71 XCEL TOP UP3 17.5 DK GREEN	216	SPSR2-10	
920			2256.83	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	704
921			2259.33	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	705
922	7.34		2261.75	7.28	7.16	21.40	10.71 XCEL TOP UP3 17.5 DK GREEN	217	SPSR2-10	
923			2264.17	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	706
924			2266.67	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	707
925	7.34		2269.09	7.30	7.16	21.20	10.71 XCEL TOP UP3 17.5 DK GREEN	218	SPSR2-10	
926			2271.51	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	708
927			2274.01	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	709
928	7.34		2276.43	7.37	7.55	21.03	10.64 XCEL TOP UP3 18 PURPLE	219	SPSR2-10	
929			2278.85	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	710
930			2281.35	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	711
931	7.42		2283.85	7.29	7.16	20.88	10.71 XCEL TOP UP3 17.5 DK GREEN	220	SPSR2-10	
932			2286.18	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	712
933			2288.67	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	713
934	7.15		2291.00	7.32	7.16	20.76	10.71 XCEL TOP UP3 17.5 DK GREEN	221	SPSR2-10	
935			2293.50	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	714
936			2296.00	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	715
937	7.42		2298.42	7.48	7.55	20.65	10.64 XCEL TOP UP3 18 PURPLE	222	SPSR2-10	
938			2300.84	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	716
939			2303.34	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	717
940	7.42		2305.84	7.39	7.55	20.57	10.64 XCEL TOP UP3 18 PURPLE	223	SPSR2-10	
941			2308.17	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	718
942			2310.70	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	719
943	7.19		2313.03	7.41	7.55	20.51	10.64 XCEL TOP UP3 18 PURPLE	224	SPSR2-10	
944			2315.53	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	720
945			2318.03	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	721
946	7.42		2320.45	7.50	7.55	20.47	10.64 XCEL TOP UP3 18 PURPLE	225	SPSR2-10	

OUTLET NO.	LAST OUTLET	DISTANCE TO PIVOT	GPM NEED	GPM DEL.	PIPE PSI	NOZZLE PSI	SPRINKLER LABEL AND NOZZLE SIZE	SPRK NO.	REG SIZE	PLUG NO.
TOWER 15	157.04	2555.84					PIPE ID CHANGES FROM 6.395 TO 5.369			
1042	9.53	2557.96	9.44	9.60	20.89	10.27	XCEL TOP UP3 20.5 DK TURQ	257	SPSR2-10	
1043		2560.29	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	786
1044		2562.79	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	787
1045	7.33	2565.29	8.19	8.35	20.88	10.49	XCEL TOP UP3 19 BLACK	258	SPSR2-10	
1046		2567.71	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	788
1047		2570.13	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	789
1048	7.34	2572.63	8.16	8.35	20.87	10.49	XCEL TOP UP3 19 BLACK	259	SPSR2-10	
1049		2575.13	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	790
1050		2577.46	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	791
1051	7.33	2579.96	8.17	8.35	20.86	10.49	XCEL TOP UP3 19 BLACK	260	SPSR2-10	
1052		2582.46	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	792
1053		2584.96	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	- - - - -	793
1054	7.50	2587.46	8.30	8.35	20.85	10.50	XCEL TOP UP3 19 BLACK	261	SPSR2-10	
OVERHANG	33.87	2589.71			126.09	ENDGUN	(1) NELSON SR-100 .75 TB			
							LINDSAY 5HP BOOSTER PUMP			

BOOSTER PUMP AT END ADDS 40.59 PSI TO PIPE PRESSURE FOR A PRESSURE OF 61.44 PSI
 FRICTION LOSS THROUGH ENDGUN VALVE IS 1.23 PSI - ENDGUN PRESSURE IS 60.21 PSI

TOTAL GPM = 1600.59

GPA = 3.04

MINIMUM RECOMMENDED REGULATOR INLET PRESSURE IS 15.00 PSI
 WITH GRADUATED ELEVATION OF 12.00 FT THE INLET PRESSURE IS 15.04 PSI FOR SPRINKLER 247
 THIS POSITION IS THE CLOSEST TO THE MINIMUM RECOMMENDED INLET PRESSURE

HYDRAULICS SUMMARY

TOWER NUMBER	ACRES UNDER SPAN	GPM NEED	ACTUAL GPM	PERCENT DEVIATION	GPM PER ACRE	AVERAGE IN. PER HR DELIVERED UNDER SPAN	AVERAGE IN. DELIVERED FOR REVOLUTION TIME		
							36 HR	48 HR	60 HR
1	2.38	7.24	9.97	38%	4.19	0.009	0.33	0.44	0.56
2	7.00	21.31	21.33	0%	3.05	0.007	0.24	0.32	0.40
3	11.62	35.38	34.98	-1%	3.01	0.007	0.24	0.32	0.40
4	16.24	49.45	49.33	0%	3.04	0.007	0.24	0.32	0.40
5	20.86	63.52	63.24	0%	3.03	0.007	0.24	0.32	0.40
6	25.49	77.59	77.41	0%	3.04	0.007	0.24	0.32	0.40
7	30.11	91.66	91.28	0%	3.03	0.007	0.24	0.32	0.40
8	34.73	105.74	105.83	0%	3.05	0.007	0.24	0.32	0.40
9	39.35	119.81	120.16	0%	3.05	0.007	0.24	0.32	0.40
10	38.33	116.70	117.01	0%	3.05	0.007	0.24	0.32	0.40
11	41.89	127.53	127.07	0%	3.03	0.007	0.24	0.32	0.40
12	45.44	138.36	137.69	0%	3.03	0.007	0.24	0.32	0.40
13	49.00	149.19	148.71	0%	3.03	0.007	0.24	0.32	0.40

14	52.56	160.02	159.61	0%	3.04	0.007	0.24	0.32	0.40
15	56.12	170.85	170.61	0%	3.04	0.007	0.24	0.32	0.40
OVERHANG	12.57	38.27	40.29	5%	3.21	0.007	0.25	0.34	0.42
ENDGUN	40.51	127.40	126.09	2%	3.11				
TOTAL	524.20	1600.00	1600.59		3.05				

SUMMARY OF SPRINKLERS

9 XCEL TOP UP3 6 GOLD
4 XCEL TOP UP3 6.5 GOLD
3 XCEL TOP UP3 7 LIME
2 XCEL TOP UP3 7.5 LIME
3 XCEL TOP UP3 8 LAVENDER
3 XCEL TOP UP3 8.5 LAVENDER
3 XCEL TOP UP3 9 GREY
4 XCEL TOP UP3 9.5 GREY
8 XCEL TOP UP3 10 TURQUOISE
11 XCEL TOP UP3 10.5 TURQ
8 XCEL TOP UP3 11 YELLOW
6 XCEL TOP UP3 11.5 YELLOW
7 XCEL TOP UP3 12 RED
5 XCEL TOP UP3 12.5 RED
9 XCEL TOP UP3 13 WHITE
8 XCEL TOP UP3 13.5 WHITE
8 XCEL TOP UP3 14 BLUE
7 XCEL TOP UP3 14.5 BLUE
7 XCEL TOP UP3 15 DK BROWN
10 XCEL TOP UP3 15.5 DK BROWN
6 XCEL TOP UP3 16 ORANGE
11 XCEL TOP UP3 16.5 ORANGE
7 XCEL TOP UP3 17 DK GREEN
16 XCEL TOP UP3 17.5 DK GREEN
23 XCEL TOP UP3 18 PURPLE
29 XCEL TOP UP3 18.5 PURPLE
16 XCEL TOP UP3 19 BLACK
9 XCEL TOP UP3 19.5 BLACK
13 XCEL TOP UP3 20 DK TURQUOISE
6 XCEL TOP UP3 20.5 DK TURQ

793 PLUGS**SUMMARY OF REGULATORS**

261 Senn PSR2 10 psi

TOTAL OF 261 REGULATORS

NOZZLE POSITION CHART

XCEL TOP UP3 6 GOLD	1, 2, 3, 4, 5, 6, 7, 8, 9
XCEL TOP UP3 6.5 GOLD	10, 11, 12, 13
XCEL TOP UP3 7 LIME	14, 15, 16
XCEL TOP UP3 7.5 LIME	17, 18
XCEL TOP UP3 8 LAVENDER	19, 20, 21
XCEL TOP UP3 8.5 LAVENDER	22, 23, 24
XCEL TOP UP3 9 GREY	25, 26, 27
XCEL TOP UP3 9.5 GREY	28, 29, 30, 31
XCEL TOP UP3 10 TURQUOISE	32, 33, 34, 35, 42, 43, 44, 45
XCEL TOP UP3 10.5 TURQ	36, 37, 38, 39, 41, 46, 47, 48, 49, 50, 51
XCEL TOP UP3 11 YELLOW	40, 52, 53, 54, 55, 56, 57, 58
XCEL TOP UP3 11.5 YELLOW	59, 60, 61, 62, 63, 64
XCEL TOP UP3 12 RED	65, 66, 67, 68, 69, 70, 71
XCEL TOP UP3 12.5 RED	72, 73, 74, 75, 76
XCEL TOP UP3 13 WHITE	77, 78, 79, 80, 81, 82, 83, 84, 85
XCEL TOP UP3 13.5 WHITE	86, 87, 88, 89, 90, 91, 92, 93
XCEL TOP UP3 14 BLUE	94, 95, 96, 97, 98, 99, 100, 101
XCEL TOP UP3 14.5 BLUE	102, 103, 104, 105, 106, 107, 109
XCEL TOP UP3 15 DK BROWN	108, 110, 111, 112, 113, 115, 116
XCEL TOP UP3 15.5 DK BROWN	114, 117, 118, 119, 120, 121, 122, 123, 124, 125
XCEL TOP UP3 16 ORANGE	126, 127, 128, 129, 130, 131
XCEL TOP UP3 16.5 ORANGE	132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142
XCEL TOP UP3 17 DK GREEN	143, 144, 145, 146, 147, 148, 149
XCEL TOP UP3 17.5 DK GREEN	150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 216, 217, 218, 220, 221
XCEL TOP UP3 18 PURPLE	161, 162, 163, 164, 165, 166, 168, 169, 170, 219, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234
XCEL TOP UP3 18.5 PURPLE	167, 171, 172, 173, 174, 175, 176, 177, 178, 179, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253
XCEL TOP UP3 19 BLACK	180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 254, 255, 258, 259, 260, 261
XCEL TOP UP3 19.5 BLACK	190, 191, 192, 193, 194, 195, 196, 197, 215
XCEL TOP UP3 20 DK TURQUOISE	198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 256
XCEL TOP UP3 20.5 DK TURQ	210, 211, 212, 213, 214, 257

**FREY PIVOT SERVICE
77 COUNTY ROAD 40
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LINDSAY 9500 - 30

SEPTEMBER 30, 2025
WISH-119641
ROBBI SMITH
JOHANSON 1

**SENNINGER 10 PSI REGULATORS
NO DROPS
NELSON SR-100 .75 TB**

Rotation time at 100% = 21.94 Hours Or 1316 minutes

1600 GPM @ 52 PSI

Installation Chart

Page 1

Out #	Drop Len	Sprk #	Noz Size	Reg	Out #	Drop Len	Sprk #	Noz Size	Reg	Out #	Drop Len	Sprk #	Noz Size	Reg	Out #	Drop Len	Sprk #	Noz Size	Reg	Out #	Drop Len	Sprk #	Noz Size	Reg	
1					61	PLUG				47		21	8	PSR210	33	PLUG				19	PLUG				
2					62	PLUG				48	PLUG				34	PLUG	33	10	PSR210	20	PLUG				
3					63	PLUG				49	PLUG				35	PLUG				21	PLUG				
4					64		10	6.5	PSR210	50	PLUG				36	PLUG				22	PLUG				
5					65	PLUG				51	PLUG				37	PLUG				23	PLUG				
6					66	PLUG				52		22	8.5	PSR210	38	PLUG				24	PLUG				
7					67	PLUG				53	PLUG				39		34	10	PSR210	25					
8					68	PLUG				54	PLUG				40	PLUG				26	PLUG				
9					69	PLUG				55	PLUG				41	PLUG				27	PLUG				
10	1	6	PSR210	70		11	6.5	PSR210	56	PLUG				42	PLUG				28	PLUG					
11					71	PLUG				57		23	8.5	PSR210	43	PLUG				29					
12					72	PLUG				58	PLUG				44		35	10	PSR210	30	PLUG				
13					73	PLUG				59	PLUG				45	PLUG				31	PLUG				
14					TOWER 1				60	PLUG				46	PLUG				32	PLUG					
15					1	PLUG				61	PLUG				47	PLUG				33					
16	2	6	PSR210	2		12	6.5	PSR210	62		24	8.5	PSR210	48	PLUG				34	PLUG					
17					3	PLUG				63	PLUG				49		36	10.5	PSR210	35	PLUG				
18					4	PLUG				64	PLUG				50	PLUG				36	PLUG				
19					5	PLUG				65	PLUG				51	PLUG				37					
20					6	PLUG				66	PLUG				52	PLUG				38	PLUG				
21					7		13	6.5	PSR210	67		25	9	PSR210	53	PLUG				39	PLUG				
22	3	6	PSR210	8		13	PLUG			68	PLUG				54		37	10.5	PSR210	40	PLUG				
23					9	PLUG				69	PLUG				55	PLUG				41					
24					10	PLUG				70	PLUG				56	PLUG				42	PLUG				
25					11	PLUG				71	PLUG				57	PLUG				43	PLUG				
26					12		14	7	PSR210	72		26	9	PSR210	58	PLUG				44	PLUG				
27					13	PLUG				73		27	TOWER 2		59	PLUG		38	10.5	PSR210	45				
28	4	6	PSR210	14		14	PLUG					60	PLUG				60	PLUG			46	PLUG			
29					15	PLUG					1	PLUG				61	PLUG			47	PLUG				
30					16	PLUG					2	PLUG				62	PLUG			48	PLUG				
31					17		15	7	PSR210	3	PLUG				63	PLUG				49					
32					18	PLUG				4		27	9	PSR210	64		39	10.5	PSR210	50	PLUG				
33					19	PLUG				5	PLUG				65	PLUG				51	PLUG				
34	5	6	PSR210	20		21	PLUG			6	PLUG				66	PLUG				52	PLUG				
35					22		16	7	PSR210	8	PLUG				67	PLUG				53					
36					23	PLUG				9		28	9.5	PSR210	68	PLUG				54	PLUG				
37					24	PLUG				10	PLUG				69		40	11	PSR210	55	PLUG				
38					25	PLUG				11	PLUG				70	PLUG				56	PLUG				
39					26	PLUG				12	PLUG				71	PLUG				57					
40	6	6	PSR210	27		17	7.5	PSR210	13	PLUG				72	PLUG				58	PLUG					
41					28	PLUG				14		29	9.5	PSR210	73	PLUG				59	PLUG				
42					29	PLUG				15	PLUG				1		41	10.5	PSR210	60	PLUG				
43					30	PLUG				16	PLUG				2	PLUG				61	PLUG				
44					31	PLUG				17	PLUG				3	PLUG				62	PLUG				
45					32		18	7.5	PSR210	18	PLUG				4	PLUG				63	PLUG				
46	7	6	PSR210	33		33	PLUG			19		30	9.5	PSR210	5		42	10	PSR210	64	PLUG				
47					34	PLUG				20	PLUG				6	PLUG				65					
48					35	PLUG				21	PLUG				7	PLUG				66	PLUG				
49					36	PLUG				22	PLUG				8	PLUG				67	PLUG				
50					37		19	8	PSR210	23	PLUG				9		43	10	PSR210	68	PLUG				
51					38	PLUG				24		31	9.5	PSR210	10	PLUG				69					
52	8	6	PSR210	39		39	PLUG			25	PLUG				11	PLUG				70	PLUG				
53					40	PLUG				26	PLUG				12	PLUG				71	PLUG				
54					41	PLUG				27	PLUG				13		44	10	PSR210	72	PLUG				
55					42		20	8	PSR210	28	PLUG				14	PLUG				73					
56					43	PLUG				29		32	10	PSR210	15	PLUG				74	PLUG				
57					44	PLUG				30	PLUG				16	PLUG				75					
58	9	6	PSR210	45		45	PLUG			31	PLUG				17		45	10	PSR210	76	PLUG				
59					46	PLUG				32	PLUG				18	PLUG				77	PLUG				
60																			78	PLUG					

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5	PLUG				65	PLUG				51	90	13.5	PSR210	37	PLUG					23	PLUG			
6	PLUG				66	PLUG				52	PLUG			38	105	14.5	PSR210	24	PLUG					
7	PLUG				67	PLUG				53	PLUG			39	PLUG				25	PLUG				
8	61	11.5	PSR210		68	76	12.5	PSR210		54	PLUG			40	PLUG				26	PLUG				
9	PLUG				69	PLUG				55	91	13.5	PSR210	41	PLUG				27	PLUG				
10	PLUG				70	PLUG				56	PLUG			42	106	14.5	PSR210	28	PLUG					
11	PLUG				71	PLUG				57	PLUG			43	PLUG				29	PLUG				
12	62	11.5	PSR210		72	77	13	PSR210		58	PLUG			44	PLUG				30	PLUG				
13	PLUG				73	PLUG				59	92	13.5	PSR210	45	PLUG				31	PLUG				
14	PLUG				TOWER 5	1	PLUG			60	PLUG			46	107	14.5	PSR210	32	PLUG					
15	PLUG				2	PLUG				61	PLUG			47	PLUG				33	PLUG				
16	63	11.5	PSR210		3	78	13	PSR210		62	PLUG			48	PLUG				34	PLUG				
17	PLUG				4	PLUG				63	93	13.5	PSR210	49	PLUG				35	PLUG				
18	PLUG				5	PLUG				64	PLUG			50	108	15	PSR210	36	PLUG					
19	PLUG				6	PLUG				65	PLUG			51	PLUG				37	PLUG				
20	64	11.5	PSR210		7	79	13	PSR210		66	PLUG			52	PLUG				38	PLUG				
21	PLUG				8	PLUG				67	94	14	PSR210	53	PLUG				39	PLUG				
22	PLUG				9	PLUG				68	PLUG			54	109	14.5	PSR210	40	PLUG					
23	PLUG				10	PLUG				69	PLUG			55	PLUG				41	PLUG				
24	65	12	PSR210		11	80	13	PSR210		70	PLUG			56	PLUG				42	PLUG				
25	PLUG				12	PLUG				71	95	14	PSR210	57	PLUG				43	PLUG				
26	PLUG				13	PLUG				72	PLUG			58	110	15	PSR210	44	PLUG					
27	PLUG				14	PLUG				73	TOWER 6	1	PLUG	59	PLUG				45	PLUG				
28	66	12	PSR210		15	81	13	PSR210		2	PLUG			60	PLUG				46	PLUG				
29	PLUG				16	PLUG				3	96	14	PSR210	61	PLUG				47	PLUG				
30	PLUG				17	PLUG				4	PLUG			62	111	15	PSR210	48	PLUG					
31	67	12	PSR210		18	PLUG				5	97	14	PSR210	63	PLUG				49	PLUG				
32	PLUG				19	82	13	PSR210		6	PLUG			64	PLUG				50	PLUG				
33	PLUG				20	PLUG				7	98	14	PSR210	65	PLUG				51	PLUG				
34	PLUG				21	PLUG				8	PLUG			66	112	15	PSR210	52	PLUG					
35	68	12	PSR210		22	PLUG				9	PLUG			67	PLUG				53	PLUG				
36	PLUG				10	83	13	PSR210		10	98	14	PSR210	68	PLUG				54	PLUG				
37	PLUG				11	PLUG				11	PLUG			69	113	15	PSR210	55	PLUG					
38	PLUG				12	PLUG				12	PLUG			70	PLUG				56	PLUG				
39	PLUG				13	PLUG				13	PLUG			71	PLUG				57	PLUG				
40	69	12	PSR210		14	84	13	PSR210		14	99	14	PSR210	72	PLUG				58	PLUG				
41	PLUG				15	PLUG				15	PLUG			73	TOWER 7	1	PLUG		59	PLUG				
42	PLUG				16	PLUG				16	PLUG			2	PLUG				60	PLUG				
43	PLUG				17	PLUG				17	PLUG			3	PLUG				61	PLUG				
44	70	12	PSR210		18	85	13	PSR210		18	100	14	PSR210	4	PLUG				62	PLUG				
45	PLUG				19	PLUG				19	PLUG			5	115	15	PSR210	63	PLUG					
46	PLUG				20	PLUG				20	PLUG			6	PLUG				64	PLUG				
47	71	12	PSR210		21	86	13.5	PSR210		21	101	14	PSR210	7	PLUG				65	PLUG				
48	PLUG				22	PLUG				22	PLUG			8	116	15	PSR210	66	PLUG					
49	PLUG				23	PLUG				23	PLUG			9	117	15.5	PSR210	67	PLUG					
50	PLUG				24	PLUG				24	PLUG			10	PLUG				68	PLUG				
51	72	12.5	PSR210		25	87	13.5	PSR210		25	102	14.5	PSR210	11	PLUG				69	PLUG				
52	PLUG				26	PLUG				26	PLUG			12	PLUG				70	PLUG				
53	PLUG				27	PLUG				27	PLUG			13	117	15.5	PSR210	71	PLUG					
54	PLUG				28	PLUG				28	PLUG			14	PLUG				72	PLUG				
55	73	12.5	PSR210		29	88	13.5	PSR210		29	103	14.5	PSR210	15	PLUG				73	PLUG				
56	PLUG				30	PLUG				30	PLUG			16	PLUG				74	TOWER 8				
57	PLUG				31	PLUG				31	PLUG			17	118	15.5	PSR210	1	PLUG					
58	PLUG				32	PLUG				32	PLUG			18	PLUG				2	PLUG				
59	74	12.5	PSR210		33	89	13.5	PSR210		33	104	14.5	PSR210	19	PLUG				3	PLUG				
60	PLUG				34	PLUG				34	PLUG			20	PLUG				4	PLUG				
61	PLUG				35	PLUG				35	PLUG			21	119	15.5	PSR210	5	PLUG					
62	PLUG				36	PLUG				36	PLUG			22	PLUG				6	PLUG				
63	PLUG																	7	PLUG					
64	75	12.5	PSR210		50	PLUG				36	PLUG			23	PLUG				8	PLUG				

FREY PIVOT SERVICE
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LINDSAY 9500 - 30

SEPTEMBER 30, 2025
WISH-119641
ROBBI SMITH
JOHANSON 1

SENNINGER 10 PSI REGULATORS
NO DROPS
NELSON SR-100 .75 TB

Rotation time at 100% = 21.94 Hours Or 1316 minutes

1600 GPM @ 52 PSI

Installation Chart

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Out #	Drop Len	Sprk #	Noz Size	Reg	Out #	Drop Len	Sprk #	Noz Size	Reg	Out #	Drop Len	Sprk #	Noz Size	Reg	Out #	Drop Len	Sprk #	Noz Size	Reg	Out #	Drop Len	Sprk #	Noz Size	Reg
9	PLUG				69	PLUG				55	PLUG				50	PLUG				44	PLUG			
10	PLUG				70	PLUG				56	PLUG				51	179	18.5	PSR210		45	PLUG			
11	PLUG				71	PLUG				57	PLUG				52	PLUG				46	PLUG			
12		135	16.5	PSR210	72		150	17.5	PSR210	58	PLUG				53	PLUG				47	PLUG			
13	PLUG				73	TOWER 9				59	PLUG				54	PLUG				48	PLUG			
14	PLUG									60	PLUG				55	PLUG				49	PLUG			
15	PLUG				1	PLUG				61	PLUG				56	PLUG				50	PLUG			
16		136	16.5	PSR210	2	PLUG				62	PLUG				57	PLUG				51	PLUG			
17	PLUG				3		151	17.5	PSR210	63	PLUG				58	PLUG				52	PLUG			
18	PLUG				4	PLUG				64	PLUG				59	181	19	PSR210		53	PLUG			
19	PLUG				5	PLUG				TOWER 10				60	PLUG				54	PLUG				
20		137	16.5	PSR210	6	PLUG				1	PLUG				61	PLUG				55	PLUG			
21	PLUG				7		152	17.5	PSR210	2	PLUG				62	PLUG				56	PLUG			
22	PLUG				8	PLUG				3	PLUG				63	182	19	PSR210		57	PLUG			
23	PLUG				9	PLUG				4	PLUG				64	PLUG				58	PLUG			
24		138	16.5	PSR210	10	PLUG				5	PLUG				TOWER 11				59	197	19.5	PSR210		
25	PLUG				11		153	17.5	PSR210	6	PLUG				1	PLUG				60	PLUG			
26	PLUG				12	PLUG				7	PLUG				2	PLUG				61	PLUG			
27	PLUG				13	PLUG				8	PLUG				3	183	19	PSR210		62	PLUG			
28		139	16.5	PSR210	14	PLUG				9	PLUG				4	PLUG				63	198	20	PSR210	
29	PLUG				15		154	17.5	PSR210	10	PLUG				5	PLUG				64	PLUG			
30	PLUG				16	PLUG				11	PLUG				6	PLUG				TOWER 12				
31	PLUG				17	PLUG				12	PLUG				7	184	19	PSR210		1	PLUG			
32		140	16.5	PSR210	18	PLUG				13	PLUG				8	PLUG				2	PLUG			
33	PLUG				19		155	17.5	PSR210	14	PLUG				9	PLUG				3	199	20	PSR210	
34	PLUG				20	PLUG				15	PLUG				10	PLUG				4	PLUG			
35	PLUG				21	PLUG				16	PLUG				11	185	19	PSR210		5	PLUG			
36		141	16.5	PSR210	22	PLUG				17	PLUG				12	PLUG				6	PLUG			
37	PLUG				23		156	17.5	PSR210	18	PLUG				13	PLUG				7	200	20	PSR210	
38	PLUG				24	PLUG				19	PLUG				14	PLUG				8	PLUG			
39	PLUG				25	PLUG				20	PLUG				15	186	19	PSR210		9	PLUG			
40		142	16.5	PSR210	26	PLUG				21	PLUG				16	PLUG				10	PLUG			
41	PLUG				27		157	17.5	PSR210	22	PLUG				17	PLUG				11	201	20	PSR210	
42	PLUG				28	PLUG				23	PLUG				18	PLUG				12	PLUG			
43	PLUG				29	PLUG				24	PLUG				19	187	19	PSR210		13	PLUG			
44		143	17	PSR210	30	PLUG				25	PLUG				20	PLUG				14	PLUG			
45	PLUG				31		158	17.5	PSR210	26	PLUG				21	PLUG				15	202	20	PSR210	
46	PLUG				32	PLUG				27	PLUG				22	PLUG				16	PLUG			
47	PLUG				33	PLUG				28	PLUG				23	188	19	PSR210		17	PLUG			
48		144	17	PSR210	34	PLUG				29	PLUG				24	PLUG				18	PLUG			
49	PLUG				35		159	17.5	PSR210	30	PLUG				25	PLUG				19	203	20	PSR210	
50	PLUG				36	PLUG				31	PLUG				26	PLUG				20	PLUG			
51	PLUG				37	PLUG				32	PLUG				27	189	19	PSR210		21	PLUG			
52		145	17	PSR210	38	PLUG				33	PLUG				28	PLUG				22	PLUG			
53	PLUG				39		160	17.5	PSR210	34	PLUG				29	PLUG				23	204	20	PSR210	
54	PLUG				40	PLUG				35	PLUG				30	PLUG				24	PLUG			
55	PLUG				41	PLUG				36	PLUG				31	190	19.5	PSR210		25	PLUG			
56		146	17	PSR210	42	PLUG				37	PLUG				32	PLUG				26	PLUG			
57	PLUG				43		161	18	PSR210	38	PLUG				33	PLUG				27	205	20	PSR210	
58	PLUG				44	PLUG				39	PLUG				34	PLUG				28	PLUG			
59	PLUG				45	PLUG				40	PLUG				35	191	19.5	PSR210		29	PLUG			
60		147	17	PSR210	46	PLUG				41	PLUG				36	PLUG				30	PLUG			
61	PLUG				47		162	18	PSR210	42	PLUG				37	PLUG				31	206	20	PSR210	
62	PLUG				48	PLUG				43	PLUG				38	PLUG				32	PLUG			
63	PLUG				49	PLUG				44	PLUG				39	192	19.5	PSR210		33	PLUG			
64		148	17	PSR210	50	PLUG				45	PLUG				40	PLUG				34	PLUG			
65	PLUG				51		163	18	PSR210	46	PLUG				41	PLUG				35	207	20	PSR210	
66	PLUG				52	PLUG				47	PLUG				42	PLUG				36	PLUG			
67	PLUG				53	PLUG				48	PLUG				43	193	19.5	PSR210		37	PLUG			
68	PLUG				54	PLUG				49	PLUG								38	PLUG				

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LINDSAY 9500 - 30

SEPTEMBER 30, 2025

WISH-119641

ROBBI SMITH

JOHANSON 1

SENNINGER 10 PSI REGULATORS

NO DROPS

NELSON SR-100 .75 TB

Rotation time at 100% = 21.94 Hours Or 1316 minutes

1600 GPM @ 52 PSI

Page 4

Installation Chart

Out #	Drop Len	Sprk #	Noz Size	Reg	Out #	Drop Len	Sprk #	Noz Size	Reg	Out #	Drop Len	Sprk #	Noz Size	Reg
39					208	20			PSR210	34	PLUG			
40	PLUG						35	PLUG		29	PLUG	245	18.5	PSR210
41	PLUG						36	PLUG		30	PLUG			
42	PLUG						37	PLUG		31	PLUG	246	18.5	PSR210
43					209	20			PSR210	38	PLUG			
44	PLUG						39	PLUG		32	PLUG			
45	PLUG						40	PLUG		33	PLUG	247	18.5	PSR210
46	PLUG						41	PLUG		34	PLUG			
47					210	20.5			PSR210	42	PLUG			
48	PLUG						42	PLUG		35	PLUG	248	18.5	PSR210
49	PLUG						43	PLUG		36	PLUG			
50	PLUG						44	PLUG		37	PLUG	249	18.5	PSR210
51					211	20.5			PSR210	45	PLUG			
52	PLUG						46	PLUG		41	PLUG	250	18.5	PSR210
53	PLUG						47	PLUG		42	PLUG			
54	PLUG						48	PLUG		43	PLUG	251	18.5	PSR210
55					212	20.5			PSR210	49	PLUG			
56	PLUG						50	PLUG		44	PLUG	252	18.5	PSR210
57	PLUG						51	PLUG		45	PLUG			
58	PLUG						52	PLUG		46	PLUG	253	18.5	PSR210
59					213	20.5			PSR210	53	PLUG			
60	PLUG						54	PLUG		47	PLUG	254	19	PSR210
61	PLUG						55	PLUG		48	PLUG			
62	PLUG						56	PLUG		49	PLUG	255	19	PSR210
63					214	20.5			PSR210	57	PLUG			
64	PLUG						58	PLUG		50	PLUG	256	20	PSR210
	TOWER 13						59	PLUG		51	PLUG			
1	PLUG						60	PLUG		52	PLUG	257	20.5	PSR210
2	PLUG						61	PLUG		53	PLUG			
3					215	19.5			PSR210	62	PLUG			
4	PLUG						63	PLUG		54	PLUG	258	19	PSR210
5	PLUG						64	PLUG		55	PLUG			
6					216	17.5			PSR210	1	TOWER 14			
7	PLUG						2	PLUG		60	PLUG	259	19	PSR210
8	PLUG						3	PLUG		61	PLUG			
9					217	17.5			PSR210	4	PLUG			
10	PLUG						5	PLUG		62	PLUG	260	19	PSR210
11	PLUG						6	PLUG		63	PLUG			
12					218	17.5			PSR210	7	PLUG			
13	PLUG						8	PLUG		64	PLUG	261	19	PSR210
14	PLUG						9	PLUG		1	TOWER 15			
15					219	18			PSR210	10	PLUG			
16	PLUG						11	PLUG		2	PLUG	262	19	PSR210
17	PLUG						12	PLUG		3	PLUG			
18					220	17.5			PSR210	4	PLUG			
19	PLUG						13	PLUG		5	PLUG	263	19	PSR210
20	PLUG						14	PLUG		6	PLUG			
21					221	17.5			PSR210	7	PLUG			
22	PLUG						15	PLUG		8	PLUG	264	19	PSR210
23	PLUG						16	PLUG		9	PLUG			
24					222	18			PSR210	10	PLUG			
25	PLUG						17	PLUG		11	PLUG	265	19	PSR210
26	PLUG						18	PLUG		12	PLUG			
27					223	18			PSR210	13	PLUG			
28	PLUG						19	PLUG		13	PLUG	266	19	PSR210
29	PLUG						20	PLUG		14	PLUG			
30					224	18			PSR210	21	PLUG			
31	PLUG						22	PLUG		22	PLUG	267	19	PSR210
32	PLUG						23	PLUG		23	PLUG			
33					225	18			PSR210	24	PLUG			
							25	PLUG		25	PLUG	268	19	PSR210
							26	PLUG		26	PLUG			
							27	PLUG		27	PLUG	269	19	PSR210

PRECIPITATION CHART FOR FULL CIRCLE

WISH-119641

SEPTEMBER 30, 2025

DEALER - FREY PIVOT SERVICE

IRRIGATOR - ROBBI SMITH
FIELD - JOHANSON 1

TOTAL LENGTH PIPE = 2589.71 SYSTEM PRESSURE = 52 PSI
 GPM UNDER PIPE = 1474.50 TOTAL GPM = 1600.59
 ACRES UNDER PIPE = 483.69
 RANGE OF ENDGUN = 106.28 RUN FOR MINIMUM PRESSURE
 GPM OF ENDGUN = 126.09
 ACRES UNDER ENDGUN = 40.51
 WATERING LENGTH = 2695.99

MOTOR SIZE (HP) = 3/4
 LOADED MOTOR RPM = 1750
 CENTER GEAR BOX RATIO = 40
 WHEEL GEAR BOX RATIO = 50
 TIRE SIZE = 11.2 X 38
 LAST TOWER SPEED (FPM) = 12.20

PRECIPITATION DATA FIGURED WITH ENDGUN RUNNING

PRECIPITATION BASED

% TIMER BASED

PRECIPITATION INCHES	% TIMER SETTING	TIME HOURS	% TIMER SETTING	PRECIPITATION INCHES	TIME HOURS
.15	100.00	21.94 - 1316(min)	100.00	.15	21.94 - 1316(min)
.20	73.89	29.69	90.00	.16	24.38
.25	59.11	37.12	80.00	.18	27.42
.30	49.26	44.54	70.00	.21	31.34
.40	36.94	59.38	60.00	.25	36.56
.50	29.55	74.23	50.00	.30	43.88
.60	24.63	89.08	45.00	.33	48.75
.70	21.11	103.92	40.00	.37	54.85
.75	19.70	111.35	35.00	.42	62.68
.80	18.47	118.77	30.00	.49	73.13
.90	16.42	133.61	25.00	.59	87.75
1.00	14.78	148.46	20.00	.74	109.69
1.25	11.82	185.58	15.00	.99	146.26
1.50	9.85	222.69	10.00	1.48	219.38
1.75	8.44	259.81	5.00	2.96	438.77

CAUTION: The relationship between precipitation rate, timer setting, and hours per revolution provided above are theoretical numbers based on the data list at the top of the page. Actual precipitation rates may vary due to the following field and machine conditions: wind drift; evaporation; tire slippage, tire loaded radius; drive train efficiency; elevation changes; soil type. Due to these varying field and machine conditions the above chart should be used as a guide only.