



Installation Data Pack for Serta

Pipe Type America
Date 9/13/22
Installer Fire Chief Equipment
Units US
Altitude 0'
Designed with Hole Sizes 7/64";1/8";9/64"

NICET CERTIFICATION

MICHAEL A. BARCLAY
CERTIFIED ENGINEERING TECHNICIAN
NICET CERTIFICATION NO.: 106070, FIRE ALARM
SYSTEMS LEVEL III, SPECIAL HAZARDS SUPPRESSION
SYSTEMS LEVEL III

 9/15/2022
SIGNATURE

Detector : ASSD #12

Type VEU
Sensitivity Objective Early Warning
Endcap Usage Create a Balanced Design
Application Defaults default
Aspirator Speed 8
Air Temperature 68.0°F
Absolute Pressure 1013hPa
System Flowrate 175.1l/min
Total Pipe Length 1016' 2"
Number Of Sample Points 38
Maximum Transport Time 86sec
Maximum Allowed TT 90sec
Minimum Hole Flow Rate 2.0l/min
Exhaust Length 0'
Exhaust Diameter 0.874
Exhaust Pressure Drop 0Pa
Invert No
Notes Set Aspirator Speed to 8.

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Thresholds

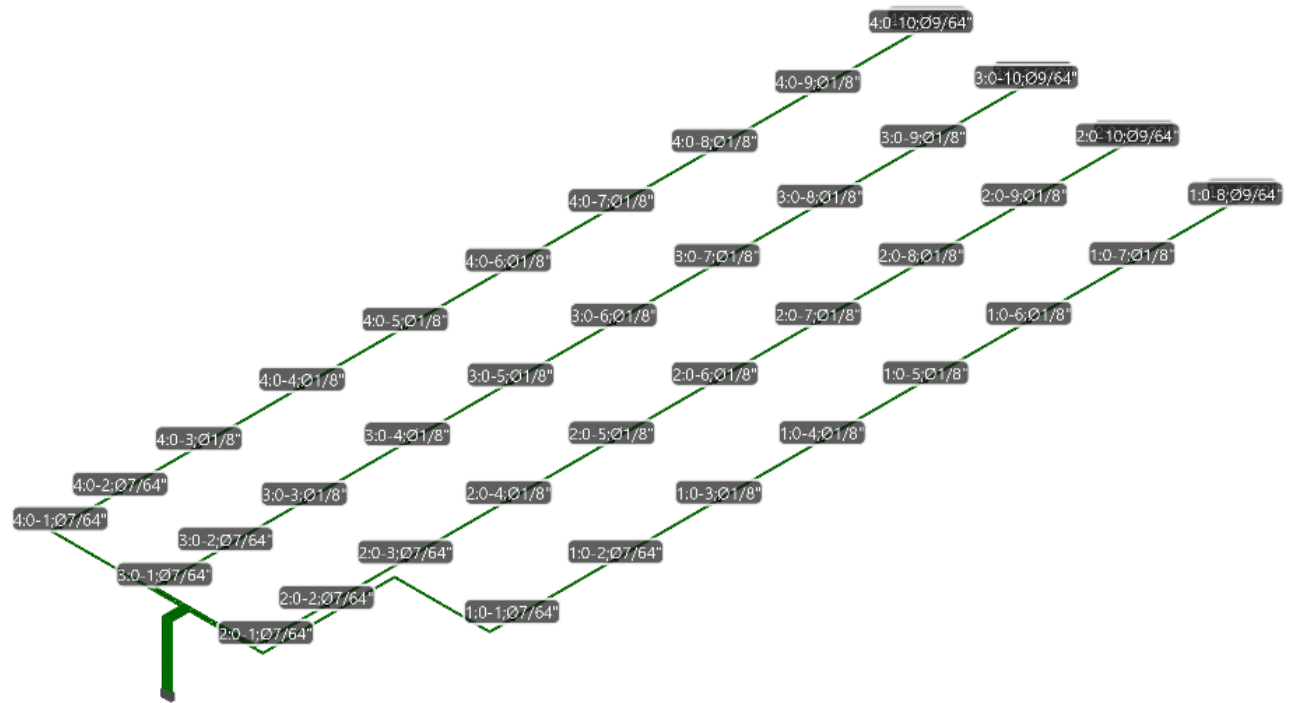
Safety Factor (% reduction in alarm threshold) 0%

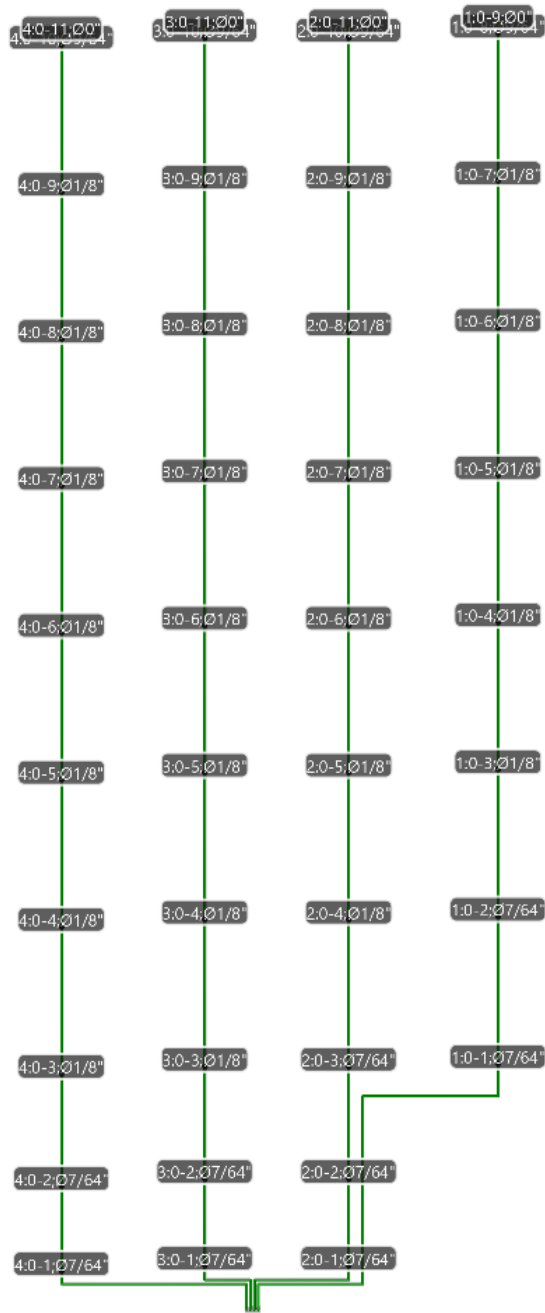
	Alert	Action	Fire 1	Fire 2
Recommended Thresholds (%/ft)	0.0128	0.0224	0.0320	0.0641
Smoke at least sensitive hole (%/ft)	0.5625	0.9844	1.4062	2.8125

Group Details

	Hole Sensitivity	Flow	Pressure	Transport Time	Hole Diameter	[Default Group]
Aggregate smoke from holes						0
Group Type						
Max Target Aggregate Sensitivity						
Min Target Aggregate Sensitivity						
Contribution ratio(%)						
Applied Max Aggregate Sensitivity						
Applied Min Aggregate Sensitivity						
Target Suction Pressure						25
Target Balance						70
Exclude from Autobalance						
1:Section0-1	1.2478	4.5	159	18	7/64"	✓
1:Section0-2	1.3179	4.3	142	22	7/64"	✓
1:Section0-3	1.1534	4.9	129	26	1/8"	✓
1:Section0-4	1.2038	4.7	118	31	1/8"	✓
1:Section0-5	1.2447	4.5	110	38	1/8"	✓
1:Section0-6	1.2757	4.4	105	47	1/8"	✓
1:Section0-7	1.2983	4.3	101	59	1/8"	✓
1:Section0-8	1.0917	5.1	100	83	9/64"	✓
2:Section0-1	1.1601	4.8	184	9	7/64"	✓
2:Section0-2	1.2133	4.6	168	12	7/64"	✓
2:Section0-3	1.2741	4.4	152	15	7/64"	✓
2:Section0-4	1.1226	5.0	136	18	1/8"	✓
2:Section0-5	1.1813	4.7	123	23	1/8"	✓
2:Section0-6	1.2336	4.5	112	28	1/8"	✓
2:Section0-7	1.2760	4.4	105	35	1/8"	✓
2:Section0-8	1.3085	4.3	100	44	1/8"	✓
2:Section0-9	1.3322	4.2	96	57	1/8"	✓
2:Section0-10	1.1205	5.0	94	81	9/64"	✓
3:Section0-1	1.1379	4.9	191	8	7/64"	✓
3:Section0-2	1.1929	4.7	174	10	7/64"	✓
3:Section0-3	1.0449	5.4	157	13	1/8"	✓
3:Section0-4	1.1058	5.1	140	17	1/8"	✓
3:Section0-5	1.1631	4.8	126	21	1/8"	✓
3:Section0-6	1.2141	4.6	116	27	1/8"	✓
3:Section0-7	1.2555	4.5	109	33	1/8"	✓
3:Section0-8	1.2870	4.4	103	42	1/8"	✓
3:Section0-9	1.3099	4.3	100	55	1/8"	✓
3:Section0-10	1.1015	5.1	98	78	9/64"	✓
4:Section0-1	1.2125	4.6	168	12	7/64"	✓
4:Section0-2	1.2681	4.4	154	14	7/64"	✓
4:Section0-3	1.1103	5.1	139	17	1/8"	✓
4:Section0-4	1.1774	4.8	123	21	1/8"	

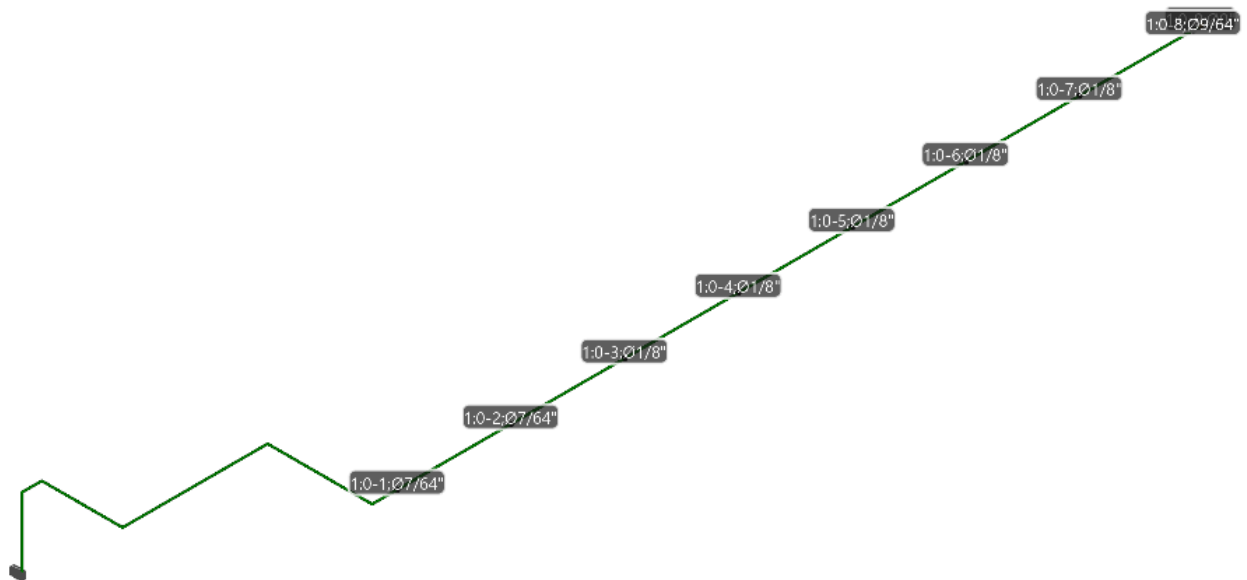
						✓
4:Section0-5	1.2408	4.5	111	25	1/8"	✓
4:Section0-6	1.2972	4.3	102	31	1/8"	✓
4:Section0-7	1.3428	4.2	95	38	1/8"	✓
4:Section0-8	1.3788	4.1	90	47	1/8"	✓
4:Section0-9	1.4051	4.0	87	61	1/8"	✓
4:Section0-10	1.1824	4.7	85	86	9/64"	✓
Number of holes						38
Flow Share(%)						100
Aggregate Sensitivity						
Balance(%)						74
Suction pressure (least)						85





Pipe:P6

Total Pipe Length	271' 7 1/2"
Ambient Pressure	0Pa
Sector Pressure	247Pa
Number of Sample Points	8
Pipe Flowrate	36.6l/min





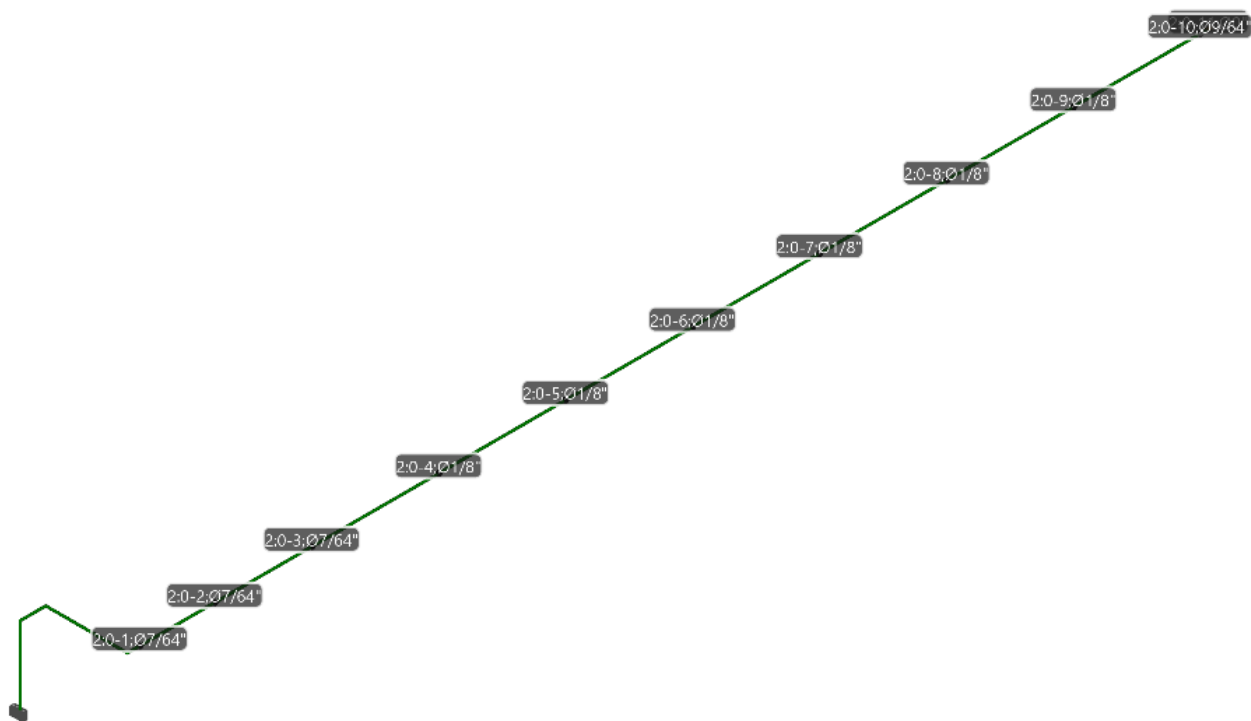
Pipe Diameter 0.874

[illegible]

[illegible]

Pipe:P10

Total Pipe Length	246' 3"
Ambient Pressure	0Pa
Sector Pressure	243Pa
Number of Sample Points	10
Pipe Flowrate	46.0l/min





Plan P10

Section0

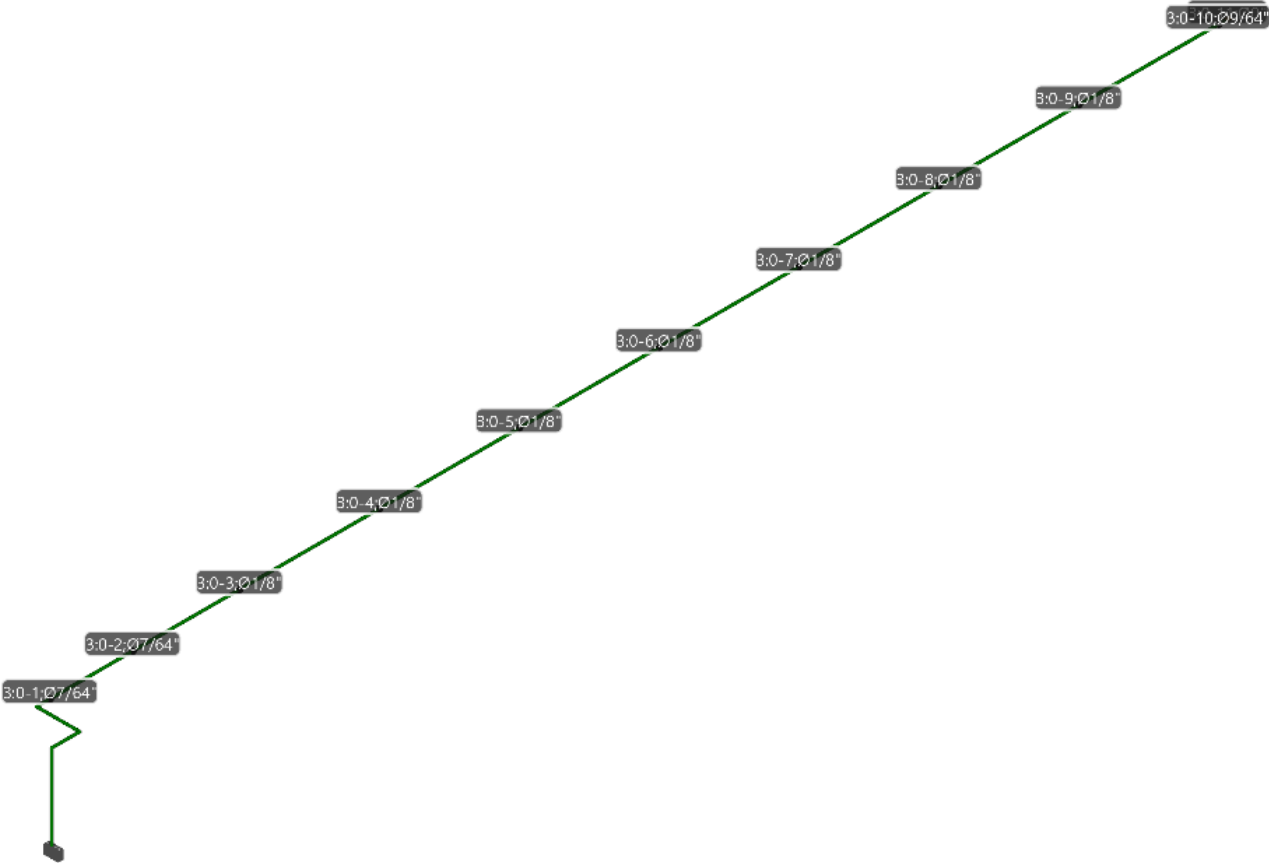
Pipe Diameter 0.874

#		Distance ft	Relative ft	Direction	Hole Diameter in	Capillary Length	Transport Time sec	Pressure Pa	Flow l/min	Flow %	Hole Sensitivity %/ft	Pipe Diameter in	Capillary Diameter	Intersection Pressure
-	Bend 90	15'	15'	F										
-	Bend 90	20'	5'	R										
-	Bend 90	36'	16'	F										
2:Section0-1	Hole	38' 5"	2' 5"		7/64"		9	184	4.8	2.8	1.1601	0.874		
2:Section0-2	Hole	53' 1 1/2"	14' 8 1/2"		7/64"		12	168	4.6	2.6	1.2133	0.874		

[illegible]

Pipe:P14

Total Pipe Length	237' 11 1/2"
Ambient Pressure	0Pa
Sector Pressure	243Pa
Number of Sample Points	10
Pipe Flowrate	47.7l/min



Isometric P14



Plan P14

Section0

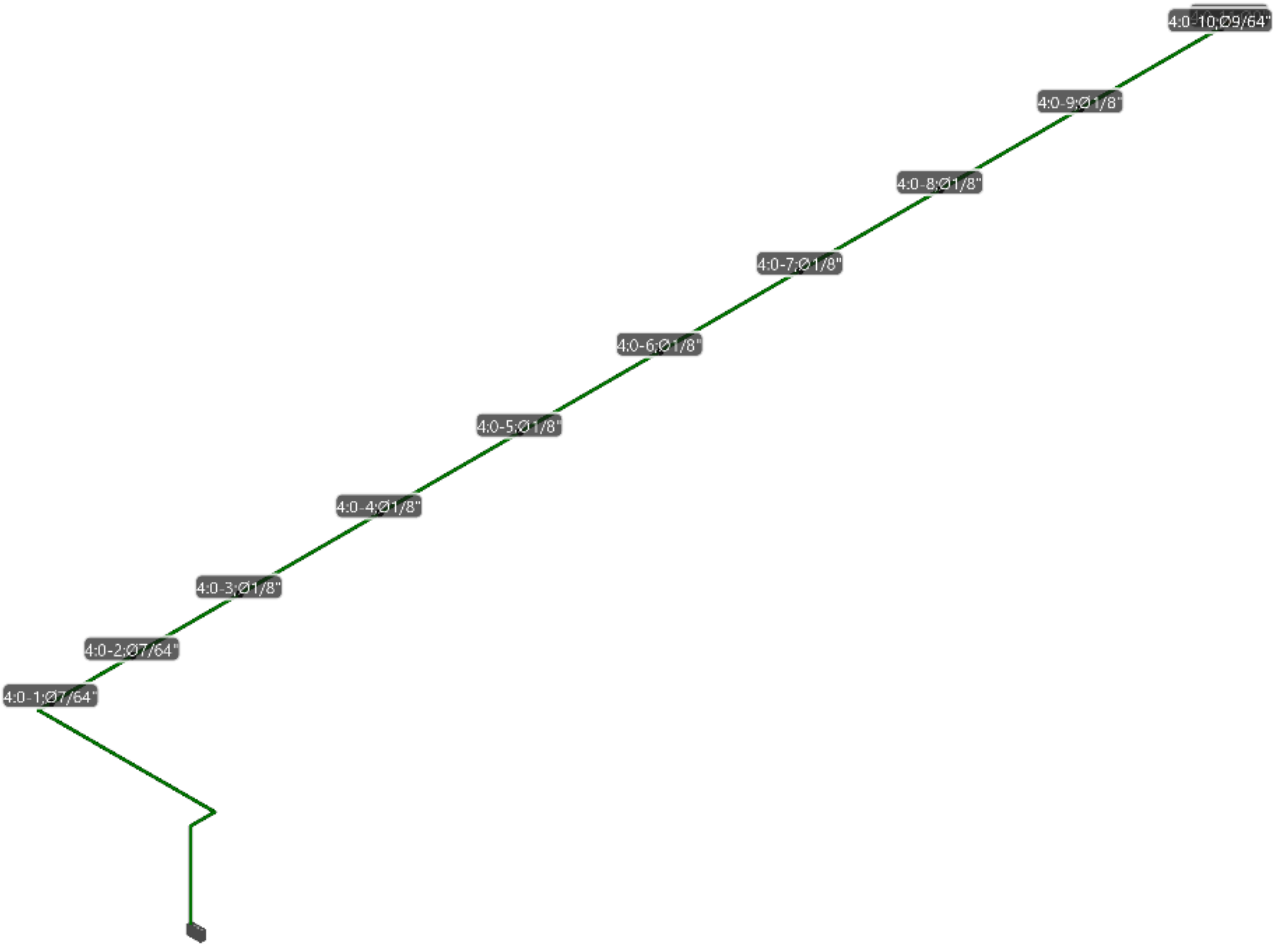
Pipe Diameter 0.874

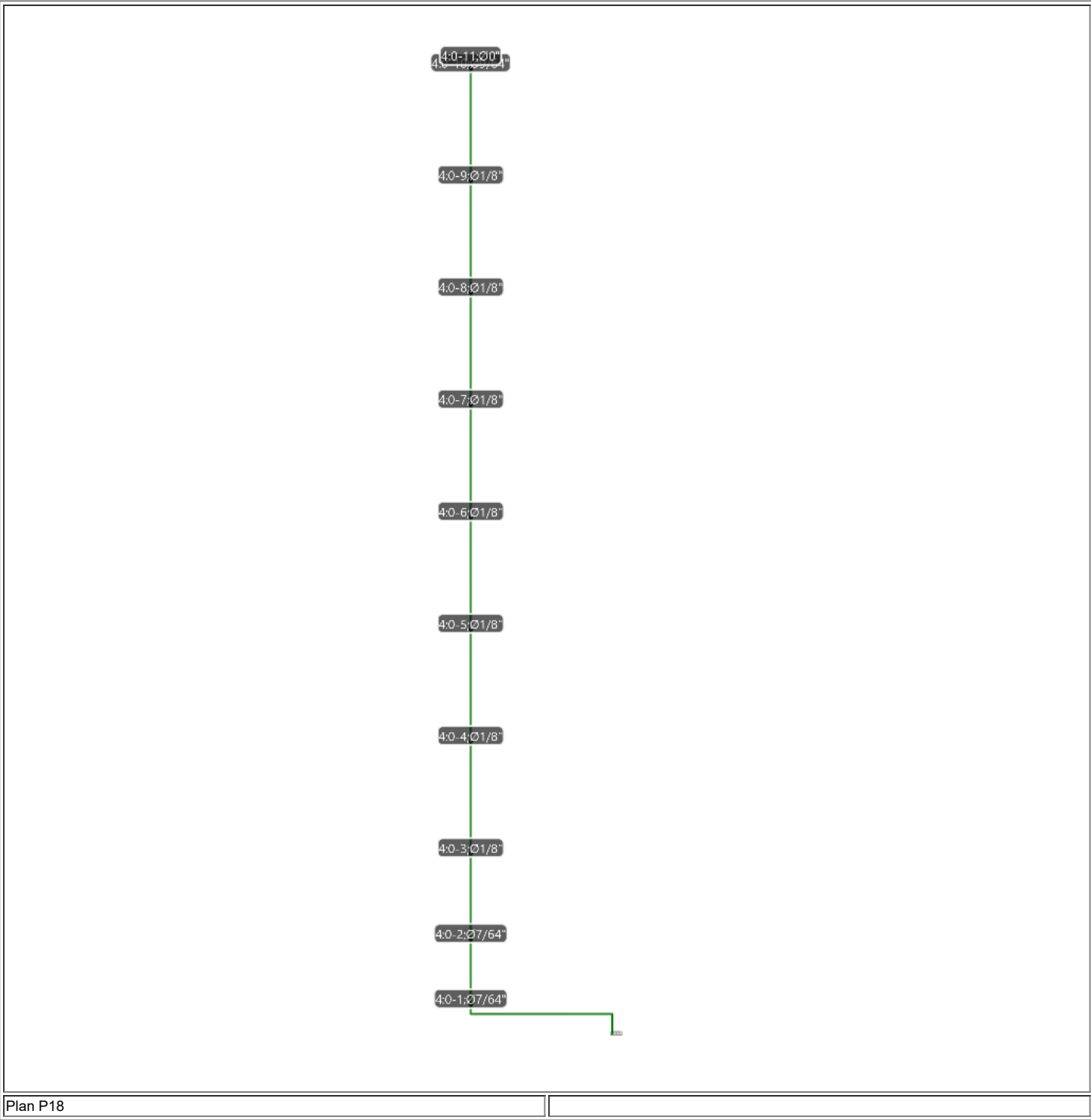
#		Distance ft	Relative ft	Direction	Hole Diameter in	Capillary Length	Transport Time sec	Pressure Pa	Flow l/min	Flow %	Hole Sensitivity %/ft	Pipe Diameter in	Capillary Diameter	Intersection Pressure
-	Bend 90	15'	15'	F										
-	Bend 90	20'	5'	L										
-	Bend 90	27' 8 1/2"	7' 8 1/2"	F										
3:Section0-1	Hole	30' 1 1/2"	2' 5"		7/64"		8	191	4.9	2.8	1.1379	0.874		
3:Section0-2	Hole	44' 10"	14' 8 1/2"		7/64"		10	174	4.7	2.7	1.1929	0.874		

[illegible]

Pipe:P18

Total Pipe Length	260' 4"
Ambient Pressure	0Pa
Sector Pressure	243Pa
Number of Sample Points	10
Pipe Flowrate	44.7l/min





Section0

Pipe Diameter 0.874

#		Distance ft	Relative ft	Direction	Hole Diameter in	Capillary Length	Transport Time sec	Pressure Pa	Flow l/min	Flow %	Hole Sensitivity %/ft	Pipe Diameter in	Capillary Diameter	Intersection Pressure
-	Bend 90	15'	15'	F										
-	Bend 90	19' 3 1/2"	4' 3 1/2"	L										
-	Bend 90	50' 7"	31' 3 1/2"	F										
4:Section0-1	Hole	52' 9 1/2"	2' 2 1/2"		7/64"		12	168	4.6	2.6	1.2125	0.874		
4:Section0-2	Hole	67' 2 1/2"	14' 5"		7/64"		14	154	4.4	2.5	1.2681	0.874		

4:Section0-3	Hole	86' 2 1/2"	19'		1/8"		17	139	5.1	2.9	1.1103	0.874		
4:Section0-4	Hole	111' 1"	24' 10 1/2"		1/8"		21	123	4.8	2.7	1.1774	0.874		
4:Section0-5	Hole	135' 11 1/2"	24' 10 1/2"		1/8"		25	111	4.5	2.6	1.2408	0.874		
4:Section0-6	Hole	160' 10"	24' 10 1/2"		1/8"		31	102	4.3	2.5	1.2972	0.874		
4:Section0-7	Hole	185' 8 1/2"	24' 10 1/2"		1/8"		38	95	4.2	2.4	1.3428	0.874		
4:Section0-8	Hole	210' 7"	24' 10 1/2"		1/8"		47	90	4.1	2.3	1.3788	0.874		
4:Section0-9	Hole	235' 5 1/2"	24' 10 1/2"		1/8"		61	87	4.0	2.3	1.4051	0.874		
4:Section0-10	Hole	260' 4"	24' 10 1/2"		9/64"		86	85	4.7	2.7	1.1824	0.874		
4:Section0-11	Endcap	261' 11"	1' 7"		0"							0.874		

