HYDRAULIC CALCULATIONS
for

Project name: MCC Longview Add-Reno
Location: 500 SW Longview Road Lee's Summit MO. 64081
Drawing no: FP1 of 1
Date: 03-09-2022

Design

Remote area number: 1
Remote area location: Collision Bay
Occupancy classification: Ordinary Hazard Group II
Density: 0.20 - Gpm/SqFt
Area of application: 1608 - SqFt
Coverage per sprinkler: 125 - SqFt
Type of sprinklers calculated: QR Upright
No. of sprinklers calculated: 14
In-rack demand: n/a - GPM
Hose streams: 250 - GPM
Total water required (including hose streams): 630.72 - GPM @ 56.53 - Psi
Type of system: Wet
Volume of dry or preaction system: n/a - Gal

Water supply information

Date: 05/19/21
Location: Hydrant 034-017FH
Source: Hydrant Inspections via Quality Plumbing

Name of contractor: Century Fire Sprinkler
Address: 1901 Bedford Road / N. Kansas City, MO. 64116
Phone number: 816-556-0808
Name of designer: RV
Authority having jurisdiction: City of Lee's Summit
Notes:

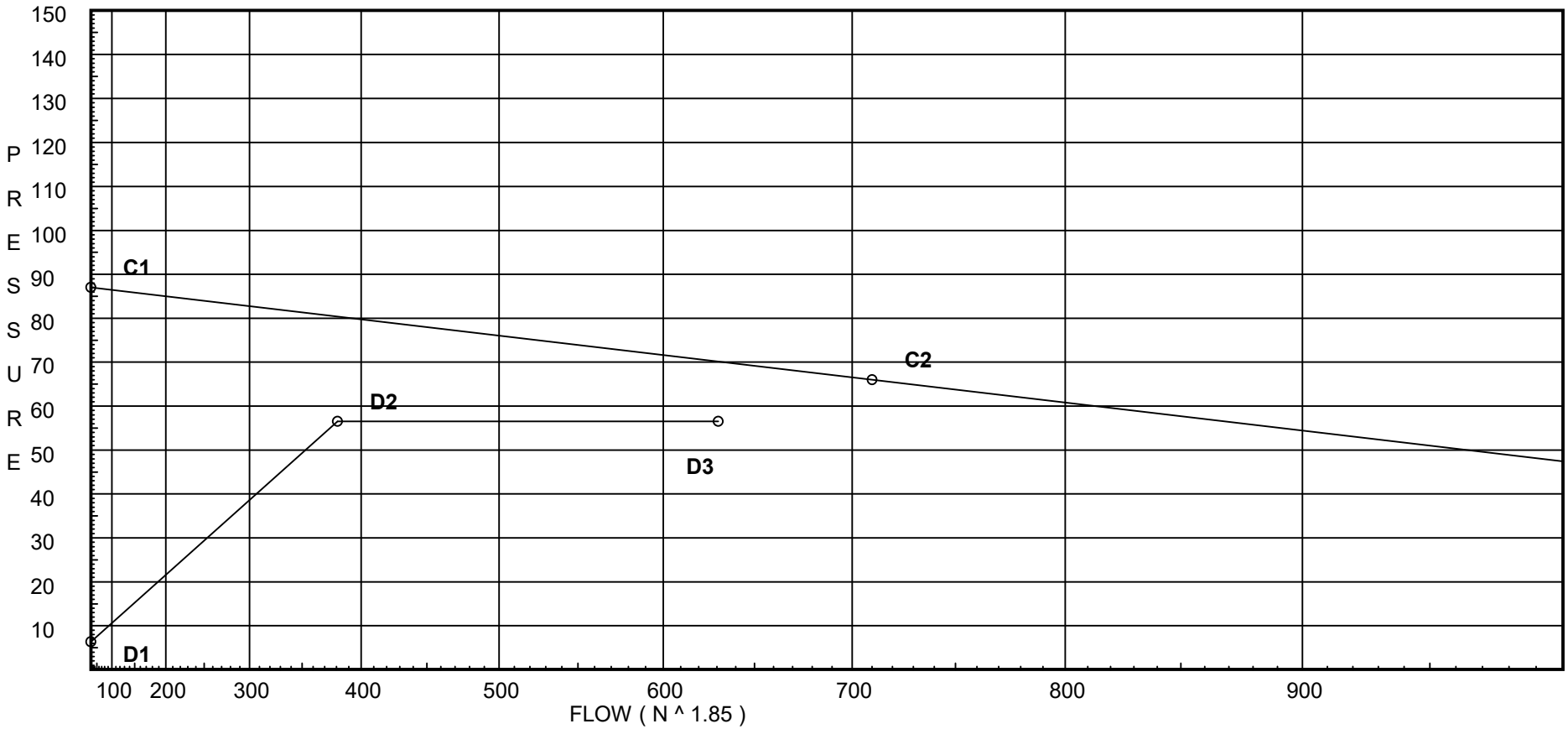
Water Supply Curve C

Hydratec Incorporated
MCC Longview Add-Reno - Area 1

Date 03-09-2022

City Water Supply:
- C1 - Static Pressure : 87
- C2 - Residual Pressure: 66
- C2 - Residual Flow : 710

Demand:
- D1 - Elevation : 6.349
- D2 - System Flow : 380.721
- D2 - System Pressure : 56.531
- Hose (Demand) : 250
- D3 - System Demand : 630.721
- Safety Margin : 13.600



Fittings Used Summary

Fitting Legend

Abbrev.	Name	½	¾	1	1¼	1½	2	2½	3	3½	4	5	6	8	10	12	14	16	18	20	24
E	NFPA 13 90' Standard Elbow	1	2	2	3	4	5	6	7	8	10	12	14	18	22	27	35	40	45	50	61
Fsp	Flow Switch Potter VSR	Fitting generates a Fixed Loss Based on Flow																			
G	NFPA 13 Gate Valve	0	0	0	0	0	1	1	1	1	2	2	3	4	5	6	7	8	10	11	13
T	NFPA 13 90' Flow thru Tee	3	4	5	6	8	10	12	15	17	20	25	30	35	50	60	71	81	91	101	121
V	90' Ell Firelock #001	0	0	0	0	0	3.5	4.3	5	0	6.8	8.5	10	13	4.5	5.1	0	0	0	0	0
Zfb	Febco 850	Fitting generates a Fixed Loss Based on Flow																			

Units Summary

Diameter Units	Inches
Length Units	Feet
Flow Units	US Gallons per Minute
Pressure Units	Pounds per Square Inch

Note: Fitting Legend provides equivalent pipe lengths for fittings types of various diameters. Equivalent lengths shown are standard for actual diameters of Sched 40 pipe and CFactors of 120 except as noted with *. The fittings marked with a * show equivalent lengths values supplied by manufacturers based on specific pipe diameters and CFactors and they require no adjustment. All values for fittings not marked with a * will be adjusted in the calculation for CFactors of other than 120 and diameters other than Sched 40 per NFPA.

SUPPLY ANALYSIS

Node at Source	Static Pressure	Residual Pressure	Flow	Available Pressure	Total Demand	Required Pressure
TEST	87.0	66	710.0	70.131	630.72	56.531

NODE ANALYSIS

Node Tag	Elevation	Node Type	Pressure at Node	Discharge at Node	Notes
1	14.66	5.6	19.93	25.0	
2	14.66	5.6	20.09	25.1	
3	14.66	5.6	20.69	25.47	
5	14.66	5.6	20.08	25.1	
H5	14.66	5.6	20.26	25.2	
6	14.66	5.6	20.83	25.56	
4	14.66		22.91		
7	12.67		30.34		
8	13.54		30.03		
9	13.9		29.92		
10	14.28		29.85		
11	14.708		29.96		
TOR	14.708		40.65		
BOR	0.0		50.41		
BFP	0.0		53.62		
UG	0.0		53.65		
TEST	0.0		56.53	250.0	
12	15.89	5.6	24.23	27.57	
13	15.89	5.6	24.42	27.68	
14	15.89	5.6	25.12	28.07	
15	15.89		26.88		
16	15.53	5.6	26.81	29.0	
17	15.53	5.6	27.2	29.21	
18	15.53		28.04		
19	16.27	5.6	26.65	28.91	
20	16.27	5.6	27.04	29.12	
21	16.27		27.87		
22	17.11	5.6	28.22	29.75	
23	17.11		28.59		

Final Calculations : Hazen-Williams

Node1 to Node2	Elev1 Elev2	K Fact	Qa Qt	Nom Act	Fitting or Eqiv	Len	Pipe Ftngs Total	CFact Pf/Ft	Pt Pe Pf	******* Notes ******
1	14.66	5.60	25.00	1.5		0.0	8.290	120	19.930	
to						0.0	0.0		0.0	
2	14.66		25.0	1.682		0.0	8.290	0.0197	0.163	Vel = 3.61
2	14.66	5.60	25.10	1.5		0.0	8.290	120	20.093	
to						0.0	0.0		0.0	
3	14.66		50.1	1.682		0.0	8.290	0.0714	0.592	Vel = 7.23
3	14.66	5.60	25.47	1.5	T	9.9	4.670	120	20.685	
to						0.0	9.900		0.0	
4	14.66		75.57	1.682		0.0	14.570	0.1527	2.225	Vel = 10.91
			0.0							
4			75.57						22.910	K Factor = 15.79
5	14.660	5.60	25.10	1.5		0.0	8.670	120	20.084	
to						0.0	0.0		0.0	
H5	14.660		25.1	1.682		0.0	8.670	0.0198	0.172	Vel = 3.62
H5	14.660	5.60	25.20	1.5		0.0	8.000	120	20.256	
to						0.0	0.0		0.0	
6	14.66		50.3	1.682		0.0	8.000	0.0719	0.575	Vel = 7.26
6	14.66	5.60	25.56	1.5	T	9.9	3.620	120	20.831	
to						0.0	9.900		0.0	
4	14.66		75.86	1.682		0.0	13.520	0.1538	2.079	Vel = 10.95
4	14.66		75.57	1.5	T	9.9	1.990	120	22.910	
to						0.0	9.900		0.862	
7	12.67		151.43	1.682		0.0	11.890	0.5524	6.568	Vel = 21.87
7	12.67		0.0	4		0.0	10.610	120	30.340	
to						0.0	0.0		-0.377	
8	13.54		151.43	4.26		0.0	10.610	0.0060	0.064	Vel = 3.41
8	13.54		58.21	4		0.0	4.440	120	30.027	
to						0.0	0.0		-0.156	
9	13.9		209.64	4.26		0.0	4.440	0.0110	0.049	Vel = 4.72
9	13.9		83.31	4		0.0	4.660	120	29.920	
to						0.0	0.0		-0.165	
10	14.28		292.95	4.26		0.0	4.660	0.0202	0.094	Vel = 6.59
10	14.28		58.02	4		0.0	10.320	120	29.849	
to						0.0	0.0		-0.185	
11	14.708		350.97	4.26		0.0	10.320	0.0283	0.292	Vel = 7.90
11	14.708		29.75	4	3V	26.861	245.180	120	29.956	
to					2T	52.668	79.529		0.0	
TOR	14.708		380.72	4.26		0.0	324.709	0.0329	10.692	Vel = 8.57
TOR	14.708		0.0	4	Fsp	0.0	12.000	120	40.648	
to						0.0	0.0		9.370	* * Fixed Loss = 3
BOR	0		380.72	4.26		0.0	12.000	0.0329	0.395	Vel = 8.57
BOR	0		0.0	4	Zfb	0.0	3.000	120	50.413	
to						0.0	0.0		3.107	* * Fixed Loss = 3.107
BFP	0		380.72	4.26		0.0	3.000	0.0330	0.099	Vel = 8.57
BFP	0		0.0	4		0.0	1.000	120	53.619	
to						0.0	0.0		0.0	
UG	0		380.72	4.26		0.0	1.000	0.0330	0.033	Vel = 8.57
UG	0		0.0	4	T	29.067	50.000	140	53.652	
to					G	2.907	46.508		0.0	
TEST	0		380.72	4.1	E	14.534	96.508	0.0298	2.879	Vel = 9.25

Final Calculations : Hazen-Williams

Node1 to Node2	Elev1 Elev2	K Fact	Qa Qt	Nom Act	Fitting or Eqiv	Len	Pipe Ftngs Total	CFact Pf/Ft	Pt Pe Pf	******* Notes ******
			250.00							Qa = 250.00
TEST			630.72						56.531	K Factor = 83.89
12	15.89	5.60	27.57	1.5		0.0	8.170	120	24.232	
to						0.0	0.0		0.0	
13	15.89		27.57	1.682		0.0	8.170	0.0236	0.193	Vel = 3.98
13	15.89	5.60	27.67	1.5		0.0	8.170	120	24.425	
to						0.0	0.0		0.0	
14	15.89		55.24	1.682		0.0	8.170	0.0856	0.699	Vel = 7.98
14	15.89	5.60	28.07	1.5	E	4.95	4.670	120	25.124	
to						0.0	4.950		0.0	
15	15.89		83.31	1.682		0.0	9.620	0.1828	1.759	Vel = 12.03
15	15.89		0.0	1.5	T	9.9	1.990	120	26.883	
to						0.0	9.900		0.862	
9	13.9		83.31	1.682		0.0	11.890	0.1829	2.175	Vel = 12.03
			0.0							
9			83.31						29.920	K Factor = 15.23
16	15.53	5.60	29.00	1.5		0.0	15.000	120	26.813	
to						0.0	0.0		0.0	
17	15.53		29.0	1.682		0.0	15.000	0.0259	0.389	Vel = 4.19
17	15.53	5.60	29.20	1.5	E	4.95	4.000	120	27.202	
to						0.0	4.950		0.0	
18	15.53		58.2	1.682		0.0	8.950	0.0942	0.843	Vel = 8.40
18	15.53		0.0	1.5	T	9.9	1.990	120	28.045	
to						0.0	9.900		0.862	
8	13.54		58.2	1.682		0.0	11.890	0.0942	1.120	Vel = 8.40
			0.0							
8			58.20						30.027	K Factor = 10.62
19	16.27	5.60	28.91	1.5		0.0	15.000	120	26.648	
to						0.0	0.0		0.0	
20	16.27		28.91	1.682		0.0	15.000	0.0259	0.388	Vel = 4.17
20	16.27	5.60	29.12	1.5	E	4.95	4.000	120	27.036	
to						0.0	4.950		0.0	
21	16.27		58.03	1.682		0.0	8.950	0.0936	0.838	Vel = 8.38
21	16.27		0.0	1.5	T	9.9	1.990	120	27.874	
to						0.0	9.900		0.862	
10	14.28		58.03	1.682		0.0	11.890	0.0936	1.113	Vel = 8.38
			0.0							
10			58.03						29.849	K Factor = 10.62
22	17.11	5.60	29.75	1.5	T	9.9	3.800	120	28.220	
to						0.0	9.900		0.0	
23	17.11		29.75	1.682		0.0	13.700	0.0272	0.372	Vel = 4.30
23	17.11		0.0	1.5	T	9.9	1.990	120	28.592	
to						0.0	9.900		1.040	
11	14.708		29.75	1.682		0.0	11.890	0.0272	0.324	Vel = 4.30
			0.0							
11			29.75						29.956	K Factor = 5.44

HYDRAULIC CALCULATIONS
for

Project name: MCC Longview Add-Reno
Location: 500 SW Longview Road Lee's Summit MO. 64081
Drawing no: FP1 of 1
Date: 03-09-2022

Design

Remote area number: 2
Remote area location: One Paint Booth
Occupancy classification: Extra Hazard
Density: 0.40 - Gpm/SqFt
Area of application: Entire - SqFt
Coverage per sprinkler: 100 (max) - SqFt
Type of sprinklers calculated: SR Upr & Pen
No. of sprinklers calculated: 11
In-rack demand: n/a - GPM
Hose streams: 500 - GPM
Total water required (including hose streams): 892.57 - GPM @ 49.619 - Psi
Type of system: Wet
Volume of dry or preaction system: n/a - Gal

Water supply information

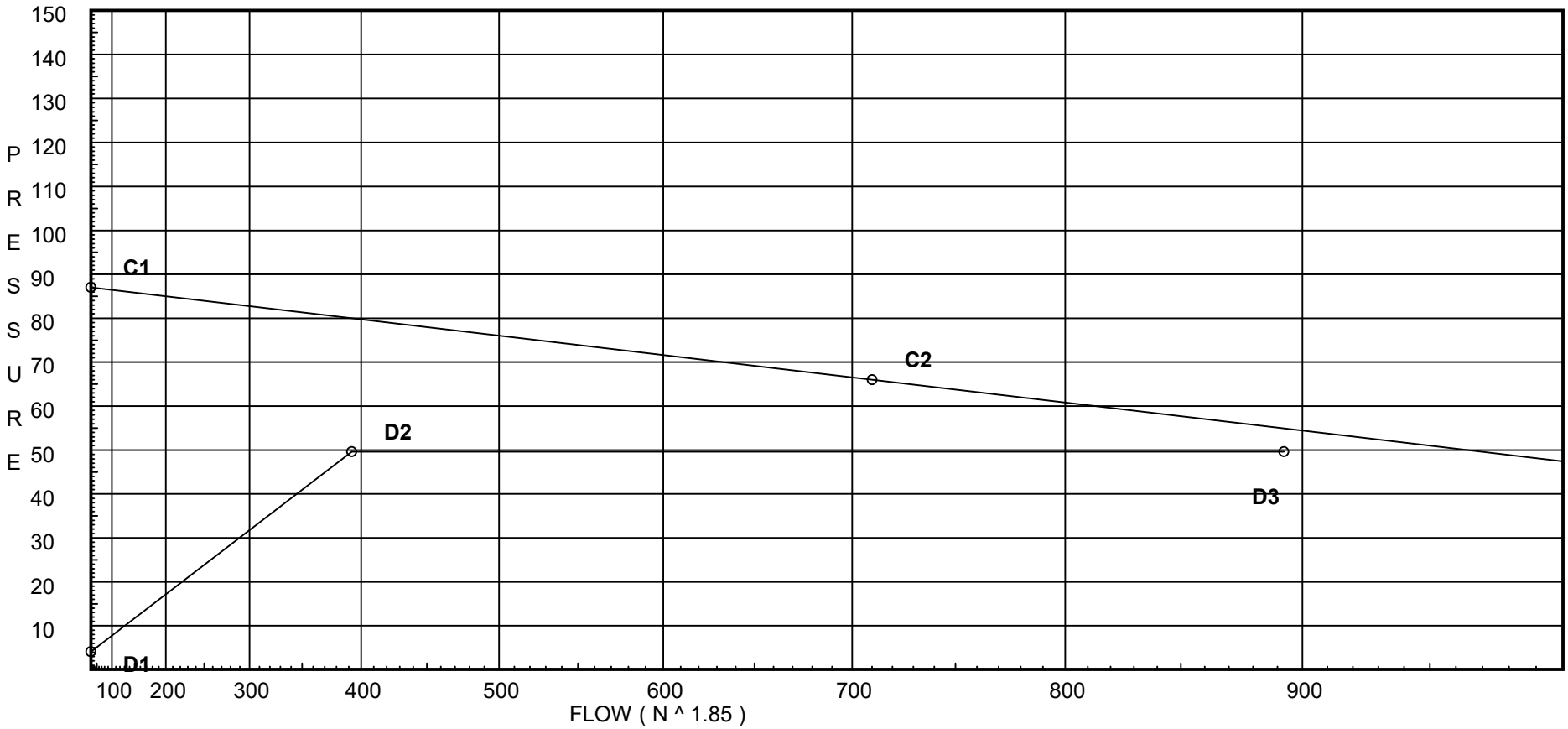
Date: 05/19/21
Location: Hydrant 034-017FH
Source: Hydrant Inspections via Quality Plumbing

Name of contractor: Century Fire Sprinkler
Address: 1901 Bedford Road / N. Kansas City, MO. 64116
Phone number: 816-556-0808
Name of designer: RV
Authority having jurisdiction: City of Lee's Summit
Notes:
Per RFI 0025
Provide protection for only one paint booth at at time.

Water Supply Curve C

City Water Supply:
- C1 - Static Pressure : 87
- C2 - Residual Pressure: 66
- C2 - Residual Flow : 710

Demand:
- D1 - Elevation : 4.114
- D2 - System Flow : 392.571
- D2 - System Pressure : 49.619
- Hose (Demand) : 500
- D3 - System Demand : 892.571
- Safety Margin : 5.312



Fittings Used Summary

Fitting Legend

Abbrev.	Name	½	¾	1	1¼	1½	2	2½	3	3½	4	5	6	8	10	12	14	16	18	20	24
B	NFPA 13 Butterfly Valve	0	0	0	0	0	6	7	10	0	12	9	10	12	19	21	0	0	0	0	0
E	NFPA 13 90' Standard Elbow	1	2	2	3	4	5	6	7	8	10	12	14	18	22	27	35	40	45	50	61
Fsp	Flow Switch Potter VSR	Fitting generates a Fixed Loss Based on Flow																			
G	NFPA 13 Gate Valve	0	0	0	0	0	1	1	1	1	2	2	3	4	5	6	7	8	10	11	13
T	NFPA 13 90' Flow thru Tee	3	4	5	6	8	10	12	15	17	20	25	30	35	50	60	71	81	91	101	121
V	90' Ell Firelock #001	0	0	0	0	0	3.5	4.3	5	0	6.8	8.5	10	13	4.5	5.1	0	0	0	0	0
Zfb	Febco 850	Fitting generates a Fixed Loss Based on Flow																			

Units Summary

Diameter Units	Inches
Length Units	Feet
Flow Units	US Gallons per Minute
Pressure Units	Pounds per Square Inch

Note: Fitting Legend provides equivalent pipe lengths for fittings types of various diameters. Equivalent lengths shown are standard for actual diameters of Sched 40 pipe and CFactors of 120 except as noted with *. The fittings marked with a * show equivalent lengths values supplied by manufacturers based on specific pipe diameters and CFactors and they require no adjustment. All values for fittings not marked with a * will be adjusted in the calculation for CFactors of other than 120 and diameters other than Sched 40 per NFPA.

SUPPLY ANALYSIS

Node at Source	Static Pressure	Residual Pressure	Flow	Available Pressure	Total Demand	Required Pressure
TEST	87.0	66	710.0	54.931	892.57	49.619

NODE ANALYSIS

Node Tag	Elevation	Node Type	Pressure at Node	Discharge at Node	Notes
DP03	5.71	11.2	7.0	29.63	
EQ03	6.71		7.37		
DP02	7.5	11.2	12.76	40.0	
EQ02	8.0		15.12		
DP01	7.5	11.2	12.76	40.0	
EQ01	8.0		13.71		
DP04	9.0	11.2	8.79	33.2	
EQ04	9.5		9.4		
DP06	8.0	11.2	8.16	32.0	
EQ06	9.5		8.6		
DP05	9.0	11.2	8.79	33.2	
EQ05	9.5		10.4		
24	9.5	10.91	8.6	32.0	K=K @ EQ06
25	9.5		9.83		
26	9.5	10.3	10.92	34.02	K=K @ EQ05
27	9.5	10.3	13.61	37.99	K=K @ EQ05
28	9.5		19.51		
A	9.5		24.08		
B	14.708		22.55		
C	14.708		24.36		
D	14.708		27.42		
E	14.708		29.17		
TOR	14.708		33.42		
BOR	0.0		43.21		
BFP	0.0		46.54		
UG	0.0		46.57		
TEST	0.0		49.62	500.0	
29	9.5	10.83	9.79	33.87	K=K @ EQ04
35	9.5		19.39		
36	9.5		19.4		
39	-1.33	11.2	9.31	34.17	
40	-1.33	11.2	9.69	34.86	
41	-1.33	11.2	11.07	37.27	
42	9.5		18.39		
43	13.08	8	15.79	31.79	
51	9.5	10.83	12.94	38.95	K=K @ EQ04
52	9.5	10.3	13.41	37.71	K=K @ EQ05
53	9.5	10.3	15.06	39.96	K=K @ EQ05

Node1 to Node2	Elev1 Elev2	K Fact	Qa Qt	Nom Act	Fitting or Eqiv	Len	Pipe Ftngs Total	CFact Pf/Ft	Pt Pe Pf	******* Notes ******
DP03	5.71	11.20	29.63	1	E	2.0	1.000	120	7.000	
to						0.0	2.000		-0.433	
EQ03	6.71		29.63	1.049		0.0	3.000	0.2693	0.808	Vel = 11.00
			0.0							
EQ03			29.63						7.375	K Factor = 10.91
DP02	7.5	11.20	40.00	1	T	5.0	0.500	120	12.755	
to						0.0	5.000		-0.217	
EQ02	8		40.0	1.049		0.0	5.500	0.4693	2.581	Vel = 14.85
			0.0							
EQ02			40.00						15.119	K Factor = 10.29
DP01	7.5	11.20	40.00	1	E	2.0	0.500	120	12.755	
to						0.0	2.000		-0.217	
EQ01	8		40.0	1.049		0.0	2.500	0.4692	1.173	Vel = 14.85
			0.0							
EQ01			40.00						13.711	K Factor = 10.80
DP04	9	11.20	33.20	1	E	2.0	0.500	120	8.787	
to						0.0	2.000		-0.217	
EQ04	9.5		33.2	1.049		0.0	2.500	0.3324	0.831	Vel = 12.32
			0.0							
EQ04			33.20						9.401	K Factor = 10.83
DP06	8	11.20	32.00	1	E	2.0	1.500	120	8.163	
to						0.0	2.000		-0.650	
EQ06	9.5		32.0	1.049		0.0	3.500	0.3106	1.087	Vel = 11.88
			0.0							
EQ06			32.00						8.600	K Factor = 10.91
DP05	9	11.20	33.20	1	T	5.0	0.500	120	8.787	
to						0.0	5.000		-0.217	
EQ05	9.5		33.2	1.049		0.0	5.500	0.3324	1.828	Vel = 12.32
			0.0							
EQ05			33.20						10.398	K Factor = 10.30
24	9.5	10.91	32.00	1.25	E	3.0	6.100	120	8.600	K = K @ EQ06
to					T	6.0	9.000		0.0	
25	9.5		32.0	1.38		0.0	15.100	0.0817	1.233	Vel = 6.86
25	9.5		33.87	1.5		0.0	7.420	120	9.833	
to						0.0	0.0		0.0	
26	9.5		65.87	1.61		0.0	7.420	0.1466	1.088	Vel = 10.38
26	9.5	10.3	34.03	1.5		0.0	8.500	120	10.921	K = K @ EQ05
to						0.0	0.0		0.0	
27	9.5		99.9	1.61		0.0	8.500	0.3166	2.691	Vel = 15.74
27	9.5	10.3	37.98	1.5	T	8.0	2.260	120	13.612	K = K @ EQ05
to						0.0	8.000		0.0	
28	9.5		137.88	1.61		0.0	10.260	0.5749	5.898	Vel = 21.73
28	9.5		254.69	4	2V	17.907	11.500	120	19.510	
to					B	15.8	33.707		3.000	* * Fixed Loss = 3
A	9.500		392.57	4.26	Fsp	0.0	45.207	0.0348	1.575	Vel = 8.84
A	9.500		0.0	4	V	8.954	11.708	120	24.085	
to						0.0	8.954		-2.256	
B	14.708		392.57	4.26		0.0	20.662	0.0349	0.721	Vel = 8.84

Final Calculations : Hazen-Williams

Node1 to Node2	Elev1 Elev2	K Fact	Qa Qt	Nom Act	Fitting or Eqiv	Len	Pipe Ftngs Total	CFact Pf/Ft	Pt Pe Pf	******* Notes ******
B	14.708		0.0	4	V	8.954	16.580	120	22.550	
to					T	26.334	35.288		0.0	
C	14.708		392.57	4.26		0.0	51.868	0.0348	1.807	Vel = 8.84
C	14.708		0.0	4	T	26.334	61.670	120	24.357	
to						0.0	26.334		0.0	
D	14.708		392.57	4.26		0.0	88.004	0.0349	3.067	Vel = 8.84
D	14.708		0.0	4	T	26.334	23.917	120	27.424	
to						0.0	26.334		0.0	
E	14.708		392.57	4.26		0.0	50.251	0.0348	1.751	Vel = 8.84
E	14.708		0.0	4	V	8.954	112.833	120	29.175	
to						0.0	8.954		0.0	
TOR	14.708		392.57	4.26		0.0	121.787	0.0348	4.244	Vel = 8.84
TOR	14.708		0.0	4	Fsp	0.0	12.000	120	33.419	
to						0.0	0.0		9.370	* * Fixed Loss = 3
BOR	0		392.57	4.26		0.0	12.000	0.0348	0.418	Vel = 8.84
BOR	0		0.0	4	Zfb	0.0	3.000	120	43.207	
to						0.0	0.0		3.226	* * Fixed Loss = 3.226
BFP	0		392.57	4.26		0.0	3.000	0.0347	0.104	Vel = 8.84
BFP	0		0.0	4		0.0	1.000	120	46.537	
to						0.0	0.0		0.0	
UG	0		392.57	4.26		0.0	1.000	0.0350	0.035	Vel = 8.84
UG	0		0.0	4	T	29.067	50.000	140	46.572	
to					G	2.907	46.508		0.0	
TEST	0		392.57	4.1	E	14.534	96.508	0.0316	3.047	Vel = 9.54
			500.00							Qa = 500.00
TEST			892.57						49.619	K Factor = 126.71
29	9.5	10.83	33.87	1.5		0.0	1.080	120	9.787	K = K @ EQ04
to						0.0	0.0		0.0	
25	9.5		33.87	1.61		0.0	1.080	0.0426	0.046	Vel = 5.34
			0.0							
25			33.87						9.833	K Factor = 10.80
35	9.5		116.61	4		0.0	2.410	120	19.386	
to						0.0	0.0		0.0	
36	9.5		116.61	4.26		0.0	2.410	0.0037	0.009	Vel = 2.62
36	9.5		138.08	4		0.0	7.310	120	19.395	
to						0.0	0.0		0.0	
28	9.5		254.69	4.26		0.0	7.310	0.0157	0.115	Vel = 5.73
			0.0							
28			254.69						19.510	K Factor = 57.66
39	-1.33	11.20	34.17	1.5		0.0	8.670	120	9.308	
to						0.0	0.0		0.0	
40	-1.33		34.17	1.61		0.0	8.670	0.0435	0.377	Vel = 5.38
40	-1.33	11.20	34.86	1.5		0.0	8.670	120	9.685	
to						0.0	0.0		0.0	
41	-1.33		69.03	1.61		0.0	8.670	0.1597	1.385	Vel = 10.88
41	-1.33	11.20	37.26	1.5	4E	16.0	17.820	120	11.070	
to						0.0	16.000		-4.690	
42	9.5		106.29	1.61		0.0	33.820	0.3552	12.012	Vel = 16.75

Node1 to Node2	Elev1 Elev2	K Fact	Qa Qt	Nom Act	Fitting or Eqiv	Len	Pipe Ftngs Total	CFact Pf/Ft	Pt Pe Pf	******* Notes ******
42	9.5		31.79	2.5	T	16.474	2.710	120	18.392	
to						0.0	16.474		0.0	
36	9.5		138.08	2.635		0.0	19.184	0.0523	1.003	Vel = 8.12
			0.0							
36			138.08						19.395	K Factor = 31.35
43	13.08	8.00	31.79	1.25	E	3.0	4.080	120	15.786	
to					T	6.0	9.000		1.550	
42	9.5		31.79	1.38		0.0	13.080	0.0807	1.056	Vel = 6.82
			0.0							
42			31.79						18.392	K Factor = 7.41
51	9.5	10.83	38.95	1.5		0.0	8.500	120	12.940	K = K @ EQ04
to						0.0	0.0		0.0	
52	9.5		38.95	1.61		0.0	8.500	0.0555	0.472	Vel = 6.14
52	9.5	10.3	37.71	1.5		0.0	8.500	120	13.412	K = K @ EQ05
to						0.0	0.0		0.0	
53	9.5		76.66	1.61		0.0	8.500	0.1940	1.649	Vel = 12.08
53	9.5	10.3	39.95	1.5	T	8.0	2.260	120	15.061	K = K @ EQ05
to						0.0	8.000		0.0	
35	9.5		116.61	1.61		0.0	10.260	0.4215	4.325	Vel = 18.38
			0.0							
35			116.61						19.386	K Factor = 26.48

Hydrant Test Inspections
MCC Longview

QUALITY PLUMBING
Inc.

Inspector: Austin Richardson

Office: 816.472.4994

Cell: 816.589.6455

austin@*qualityplumbing*.com

5/19/21

Hydrant 034-006FH

Hydrant ID:	034-006FH
Residual/static pressure:	75/100 psi
GPM Flow:	935 GPM
Make:	Kennedy
Year:	2006
Visual Valve Shut off:	Yes
Outlet Size:	1) 4 inch outlet 2) 2.5 inch outlet
Outlet Numbers:	3
Pass or Fail:	Pass

Hydrant 034-005FH

Hydrant ID:	034-015FH
Residual/static pressure:	78/103 psi
GPM Flow:	850 GPM
Make:	Waterous
Year:	1998
Visual Valve Shut off:	No
Outlet Size:	1) 4 inch outlet 2) 2.5 inch outlet
Outlet Numbers:	3
Pass or Fail:	Pass

Hydrant 034-007FH

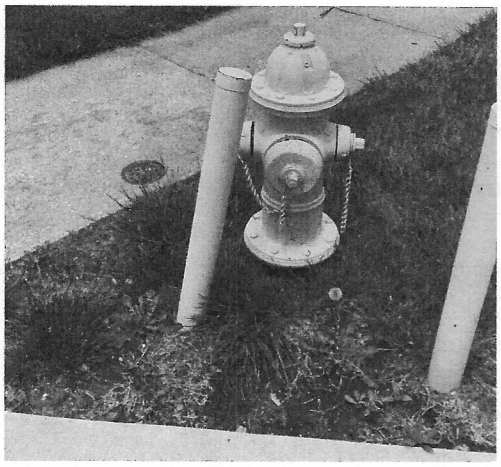
Hydrant ID:	034-007FH
Residual/static Pressure:	74/98 psi
GPM Flow:	960 GPM
Make:	Kennedy
Year:	2006
Visual Valve Shut off:	Yes
Outlet Size:	1) 4 inch outlet 2) 2.5 inch outlet
Outlet Numbers:	3
Pass or Fail:	Pass

Hydrant 034-008FH

Hydrant ID:	034-008FH
Residual/ static Pressure:	72//93 psi
GPM Flow:	955 GPM
Make:	Mueller
Year:	1985
Visual Valve Shut off:	Yes
Outlet Size:	1) 4 inch outlet 2) 2.5 inch outlet
Outlet Numbers:	3
Pass or Fail:	Pass

Hydrant 034-009FH

Hydrant ID:	034-009FH
Residual/static Pressure:	66/88 psi
GPM Flow:	865 GPM
Make:	Mueller
Year:	1985
Visual Valve Shut off:	Yes
Outlet Size:	1) 4 inch outlet 2) 2.5 inch outlet
Outlet Numbers:	3
Pass or Fail:	Pass



Hydrant 034-011 FH

Hydrant ID:	034-011FH
Residual/static Pressure:	72/98 psi
GPM Flow:	1050 GPM
Make:	Mueller
Year:	1985
Visual Valve Shut off:	Yes
Outlet Size:	1) 4 inch outlet 2) 2.5 inch outlet
Outlet Numbers:	3
Pass or Fail:	Pass (Ballard needs to be fixed away from Hydrant)

Hydrant 034-012FH

Hydrant ID:	034-012 FH
Residual/static Pressure:	72/94 psi
GPM Flow:	1001 GPM
Make:	Mueller
Year:	1985
Visual Valve Shut off:	Yes
Outlet Size:	1) 4 inch outlet 2) 2.5 inch outlet
Outlet Numbers:	3
Pass or Fail:	Pass

Hydrant 034-016FH
Hard to operate

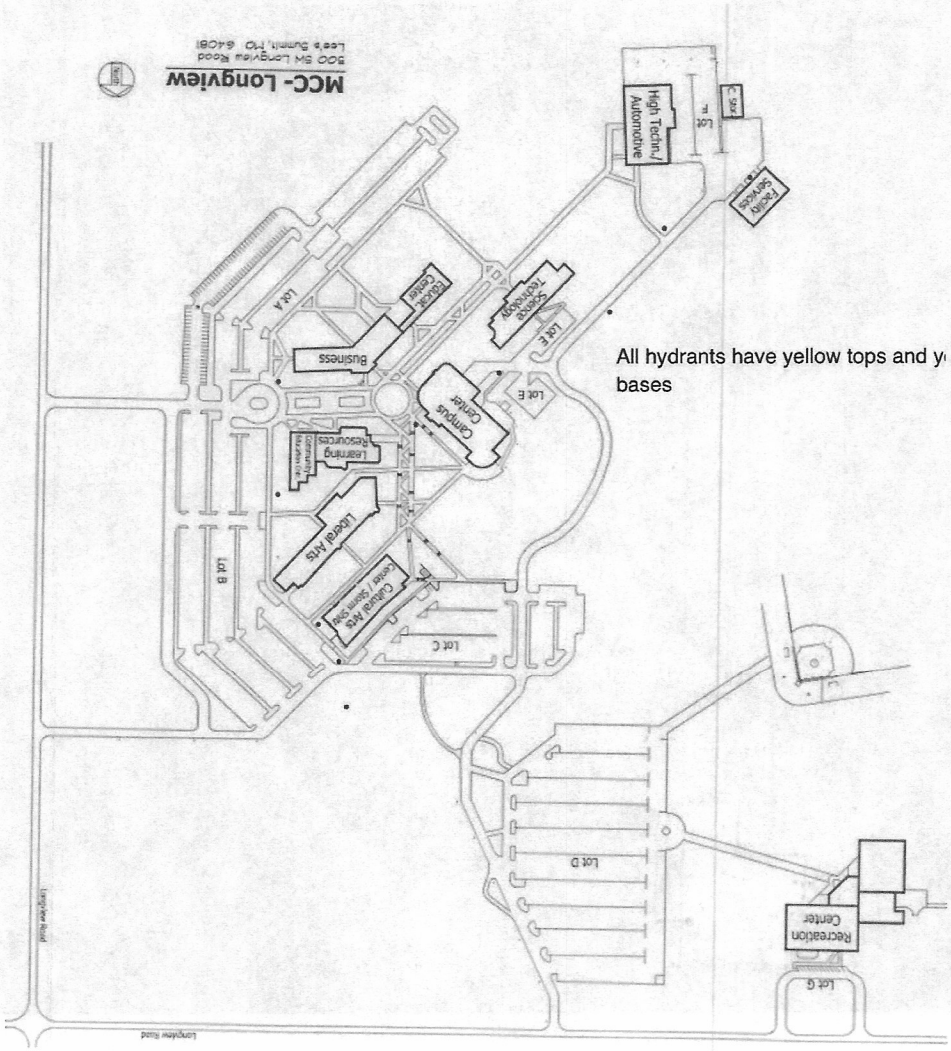
Hydrant ID:	034-016FH
Residual/static Pressure:	67/87 psi
GPM Flow:	865
Make:	Mueller
Year:	1973
Visual Valve Shut off:	Yes
Outlet Size:	1) 4 inch outlet 2) 2.5 inch outlet
Outlet Numbers:	3
Pass or Fail:	Pass (hard to operate and needs to face road side)

Hydrant 034-017FH

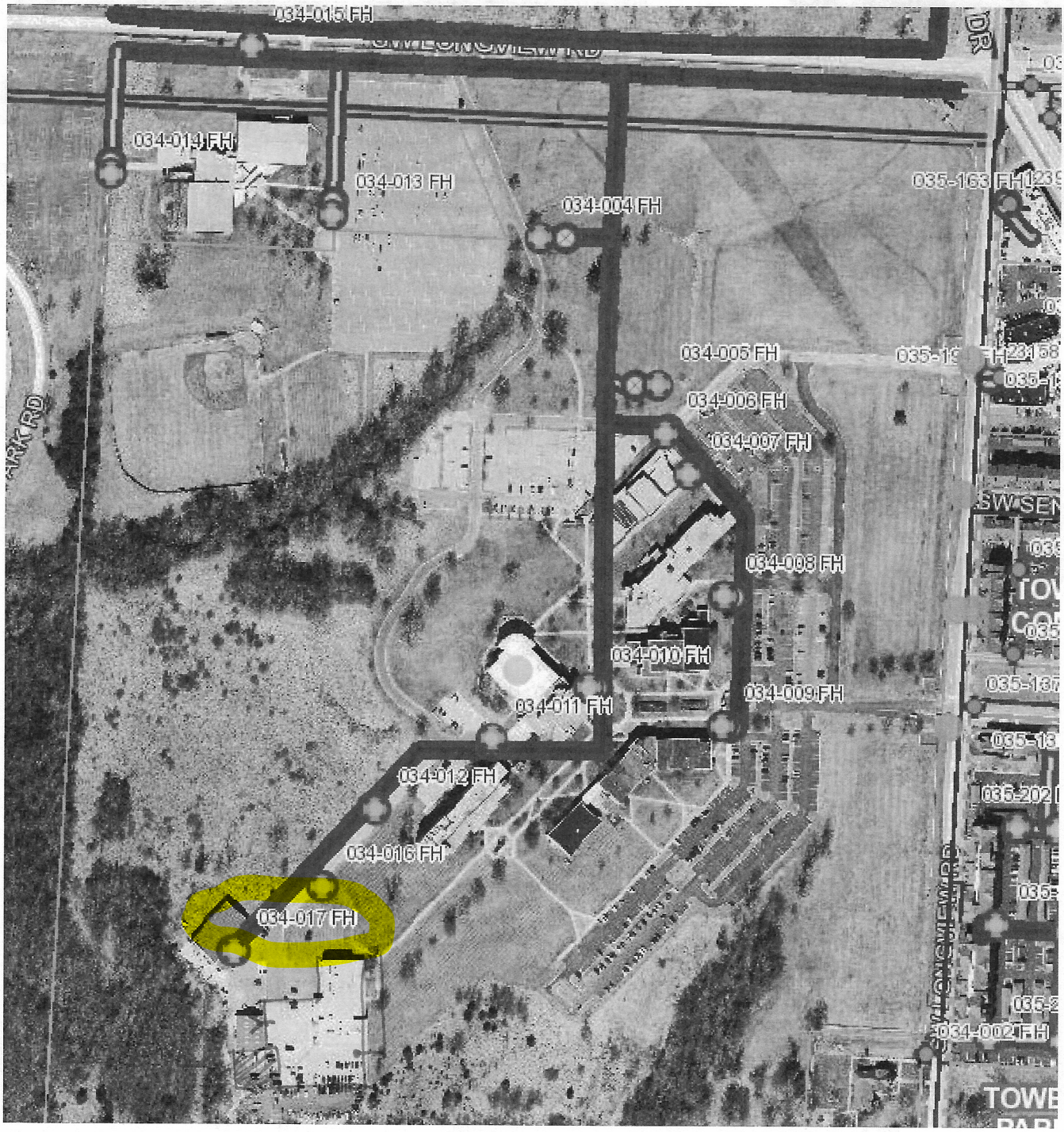
Hydrant ID:	034-017FH
Residual/static Pressure:	66/87 psi
GPM Flow:	710 GPM
Make:	Waterous
Year:	1996
Visual Valve Shut off:	Yes
Outlet Size:	1) 4 inch outlet 2) 2.5 inch outlet
Outlet Numbers:	3
Pass or Fail:	Pass

Hydrant 034-011FH

Hydrant ID:	034-011FH
Residual/static pressure:	N/a does not operate
GPM Flow:	N/a does not operate
Make:	Mueller
Year:	1988
Visual Valve Shut off:	Yes
Outlet Size:	1) 4 inch outlet 2) 2.5 inch outlet
Outlet Numbers:	3
Pass or Fail:	Fail, Does not operate



MCC provided map



City of Lee's Summit Provided GIS maps