

November 4, 2011

John Shutak
City of Lawrence Utilities Department – Utilities Engineer
720 W. 3rd Street
Lawrence, KS 66044

RE: Wakarusa Apartments water meter variance request

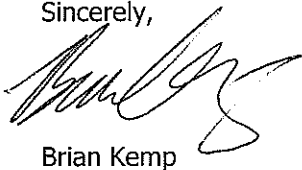
Dear John,

The purpose of this letter is to request a variance from city code 19-302(1)(B) on behalf of Highland Construction LC, for the installation of single meters for all of the buildings in the above referenced project. City code 19-302(1)(B) states that apartment houses having twelve living units or less shall have a water meter for each living unit, unless the installation of a single meter for all units is applied for by the owner and approved by the City Commission.

In this development the water supply fixture count varies from 20 fixtures in the 4-plexes up to 76 fixtures in the multi-bedroom 8-plex buildings. Based on the largest fixture unit count, the attached sheets from the 2006 IPC, and an assumed static pressure of greater than 40 psi, the water meter sizes for all the buildings may be 1" with a 1-1/2" distribution pipe. The determining factor for meter and distribution pipe size on the included 2006 IPC chart is the maximum development length. The longest maximum development length we are proposing is 105 feet to serve building D (see attached figure) as determined from the site plan. We propose to apply this configuration to all the buildings in this development. We are requesting this variance for all the buildings in the development as shown on the included reference figure.

Please let me know if you require any additional information in order to process this variance request.

Sincerely,



Brian Kemp

APPENDIX E

TABLE E201.1
MINIMUM SIZE OF WATER METERS, MAINS AND DISTRIBUTION PIPING
BASED ON WATER SUPPLY FIXTURE UNIT VALUES (w.u.f.u.)

BASED ON WATER SUPPLY PLANTURE UNIT VALUES (W.M.U.)											
METER AND SERVICE PIPE (inches)	DISTRIBUTION PIPE (inches)	MAXIMUM DEVELOPMENT LENGTH (feet)									
Pressure Range 30 to 39 psi		40	60	80	100	150	200	250	300	400	500
3/4	1/2	2.5	2	1.5	1.5	1	1	0.5	0.5	0	0
3/4	3/4	9.5	7.5	6	5.5	4	3.5	3	2.5	2	1.5
3/4	1	32	25	20	16.5	11	9	7.8	6.5	5.5	4.5
1	1	32	32	27	21	13.5	10	8	7	5.5	5
3/4	1 1/4	32	32	32	32	30	24	20	17	13	10.5
1	1 1/4	80	80	70	61	45	34	27	22	16	12
1 1/2	1 1/4	80	80	80	75	54	40	31	25	17.5	13
1	1 1/2	87	87	87	87	84	73	64	55	45	36
1 1/2	1 1/2	151	151	151	151	117	92	79	69	54	43
2	1 1/2	151	151	151	151	128	99	83	72	56	45
1	2	87	87	87	87	87	87	87	87	87	86
1 1/2	2	275	275	275	275	258	223	196	174	144	122
2	2	365	365	365	365	318	266	229	201	160	134
2	2 1/2	533	533	533	533	533	495	448	409	353	311

METER AND SERVICE PIPE (inches)	DISTRIBUTION PIPE (inches)	MAXIMUM DEVELOPMENT LENGTH (feet)									
Pressure Range 40 to 49 psi		40	60	80	100	150	200	250	300	400	500
3/4	1/2	3	2.5	2	1.5	1.5	1	1	0.5	0.5	0.5
3/4	3/4	9.5	9.5	8.5	7	5.5	4.5	3.5	3	2.5	2
3/4	1	32	32	32	26	18	13.5	10.5	9	7.5	6
1	1	32	32	32	32	21	15	11.5	9.5	7.5	6.5
3/4	1 1/4	32	32	32	32	32	32	32	27	21	16.5
1	1 1/4	80	80	80	80	65	52	42	35	26	20
1 1/2	1 1/4	80	80	80	80	75	59	48	39	28	21
1	1 1/2	87	87	87	87	87	87	87	78	65	55
1 1/2	1 1/2	151	151	151	151	151	130	109	93	75	63
2	1 1/2	151	151	151	151	151	139	115	98	77	64
1	2	87	87	87	87	87	87	87	87	87	87
1 1/2	2	275	275	275	275	275	275	264	238	198	169
2	2	365	365	365	365	365	349	304	270	220	185
2	2 1/2	533	533	533	533	533	533	533	528	456	403

(continued)