



To: Scott Boduch, AIA
ARCHITECT, PRINCIPAL
ROGUE ARCHITECTURE

Date: 11.05.2019

Re: Parker Retail

WATER METER JUSTIFICATION LETTER

Total fixture unit count for the Retail building is 45.8 fixture units. See attached JCAACE Fixture Count Work sheet for fixtures. Irrigation is not included in this calculation as it is assumed to operate during off-peak hours when the building is primarily closed.

Per the 2018 IPC table E201.1 Pressure Range 50-60 psi Minimum size of Water Meters, Mains and Distribution Piping based on Water Supply Fixture Units Running 200' linear feet
A 1" domestic water meter with a 1-1/2" building distribution will be required for this building

Please let me know if you have any questions of concerns

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JCAA CONSULTING ENGINEERS

Job Title PARKER RETAIL

Job No. _____

By _____

Checked _____

Proposed							
Fixture	Qty.	CW FU	CW FU 100%	HW FU 100%	Total FU for Domestic Water Tap/Meter Sizing	Waste or Sewer FU	Total Waste or Sewer FU
WC Tank 1.6 GPF		5	0	-	0	4	0
WC Flush Valve 1.6 GPF		10	0	-	0	4	0
PRESSURE ASSIST WATER CLOSET	6	2	12	-	12	4	24
Urinal 3/4" Flush Valve, < 1.0 GPF		5	0	-	0	2	0
Urinal 1" Flush Valve, < 1.0 GPF		10	0	-	0	2	0
Urinal Flush Tank, > 1.0 GPF		3	0	-	0	4	0
PUBLIC LAVS	6	2	9	9	12	1	6
Lavatory (private)		0.7	0	0	0	1	0
S-1		2	0	0	0	1	0
Kitchen Sink (hotel, restaurant)		4	0	0	0	2	0
BREAK ROOM SINK	2	1.4	2	2	2.8	2	4
Sink General 1½" trap		4	0	0	0	2	0
Laundry Tub		3	0	0	0	2	0
Sink Washup each set of faucets		3	0	0	0	2	0
Bedpan Washer Flush Valve w/sink		10	0	-	0	4	0
MOP SERVICE SINK	2	3	4.5	4.5	6	2	4
Shower (public)		4	0	0	0	2	0
Shower (private)		1.4	0	0	0	2	0
Bathtub (public)		4	0	0	0	2	0
Bathtub (private)		1.4	0	0	0	2	0
DRINKING FOUNTAIN	2	0.25	0.5	-	0.5	0.5	1
Hose Bibb	1	2.5	2.5	-	2.5	—	—
Hose Bibb (additional)	2	1	2	-	2	—	—
Clotheswasher (commercial)		4	0	0	0	3	0
Clotheswasher (residential)		1.4	0	0	0	2	0
Hand Sink	4	2	6	6	8	1	4
Hand Sink Indirect		2	0	0	0	—	—
3-Compartment Sink		4	0	0	0	—	—
Prep Sink		3	0	0	0	—	—
Dishwasher (hotel, restaurant)		6	—	0	0	—	—
Dishwasher (private)		1.4	—	0	0	2	
Glasswasher (hotel, restaurant)		6	—	0	0	—	—
Coffee Brewer		0.25	0	-	0	—	—
Tea Brewer		0.25	0	-	0	—	—
Carbonator		0.25	0	-	0	—	—
Ice Machine		0.25	0	-	0	—	—
Bathroom Group, ≤ 1.6 GPF (hotel, apartment)		3.6	0	0	0	5	0
Bathroom Group, > 1.6 GPF (hotel, apartment)		8	0	0	0	6	0
2" Floor Sink		—	—	—	—	2	0
3" Floor Sink		—	—	—	—	6	0
4" Floor sink		—	—	—	—	8	0
2" Floor Drain		—	—	—	—	2	0
Floor Drain-Emergency		—	—	—	—	—	—
Totals			38.5	21.5	45.8		43

APPENDIX E

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

METER AND SERVICE PIPE (inches)	DISTRIBUTION PIPE (inches)	MAXIMUM DEVELOPMENT LENGTH (feet)									
		40	60	80	100	150	200	250	300	400	500
Pressure Range 50 to 60 psi		40	60	80	100	150	200	250	300	400	500
3/4	1/2 ^a	3	3	2.5	2	1.5	1	1	1	0.5	0.5
3/4	3/4	9.5	9.5	9.5	8.5	6.5	5	4.5	4	3	2.5
3/4	1	32	32	32	32	25	18.5	14.5	12	9.5	8
1	1	32	32	32	32	30	22	16.5	13	10	8
3/4	1 1/4	32	32	32	32	32	32	32	32	29	24
1	1 1/4	80	80	80	80	80	68	57	48	35	28
1 1/2	1 1/4	80	80	80	80	80	75	63	53	39	29
1	1 1/2	87	87	87	87	87	87	87	87	82	70
1 1/2	1 1/2	151	151	151	151	151	151	139	120	94	79
2	1 1/2	151	151	151	151	151	151	146	126	97	81
1	2	87	87	87	87	87	87	87	87	87	87
1 1/2	2	275	275	275	275	275	275	275	275	247	213
2	2	365	365	365	365	365	365	365	329	272	232
2	2 1/2	533	533	533	533	533	533	533	533	533	486

METER AND SERVICE PIPE (inches)	DISTRIBUTION PIPE (inches)	MAXIMUM DEVELOPMENT LENGTH (feet)									
		40	60	80	100	150	200	250	300	400	500
Pressure Range Over 60		40	60	80	100	150	200	250	300	400	500
3/4	1/2 ^a	3	3	3	2.5	2	1.5	1.5	1	1	0.5
3/4	3/4	9.5	9.5	9.5	9.5	7.5	6	5	4.5	3.5	3
3/4	1	32	32	32	32	32	24	19.5	15.5	11.5	9.5
1	1	32	32	32	32	32	28	28	17	12	9.5
3/4	1 1/4	32	32	32	32	32	32	32	32	32	30
1	1 1/4	80	80	80	80	80	80	69	60	46	36
1 1/2	1 1/4	80	80	80	80	80	80	76	65	50	38
1	1 1/2	87	87	87	87	87	87	87	87	87	84
1 1/2	1 1/2	151	151	151	151	151	151	151	144	114	94
2	1 1/2	151	151	151	151	151	151	151	151	118	97
1	2	87	87	87	87	87	87	87	87	87	87
1 1/2	2	275	275	275	275	275	275	275	275	275	252
2	2	365	368	368	368	368	368	368	368	318	273
2	2 1/2	533	533	533	533	533	533	533	533	533	533

For SI: 1 inch = 25.4, 1 foot = 304.8 mm.
 a. Minimum size for building supply is 3/4-inch pipe.