

WCI ORIGINAL COMMUNITIES, INC.

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03 AUG 14 AM 9:14

August 13, 2003

(030000)

Florida Public Service Commission
Division of the Commission Clerk and Administrative Services,
2540 Shumard Oak Blvd.,
Tallahassee, FL 32399-0850

COMMISSION
CLERK

03 AUG 14 PM 3:37

RECEIVED-FPSC

RE: Individual water metering for mid rise and high rise buildings.

To whom it may concern:

Regarding the above captioned topic, please consider this letter and attachments as a "for the record" commentary in lieu of first hand testimony at your workshop of the 7th of this month.

Per your published "Notice of Staff Workshop" of July 9th, we hereby add our comments and input in writing for your consideration as was required in the notice (by August 14th).

Our firm is widely considered to be among the premier mid rise and high rise developers in the state, and we have broad experience in the design and planning of high rise condominiums. It is our considered opinion that the proposal to individually meter high rise buildings is a flawed one that does not bear up under scrutiny, and which does not truly achieve its stated purpose.

Utility Companies and sub-metering equipment manufacturers would enjoy a financial windfall if this proposal is adopted statewide. However, it does not provide any real benefits for mid and high rise residents, condo associations, or builders and developers of this product. The high first cost, long term maintenance problems, and liabilities inherent in individual metering can not be overcome.

From a conservation point of view, the proposal ignores other resource issues, such as energy consumption. For example, individually metered units would mandate individual hot water heaters for each unit, thereby eliminating a much more economical and efficient method of providing hot water, namely, the central plant method. This single source hot water supply is much more efficient, but could no longer be relied upon or included into building engineering if individual water meters are mandated. Enclosed is a letter from Robert M Swedroe, Architects and Planners, (Mr. Michael Agnoli) which further addresses this issue.

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FPSC-COMMISSION CLERK

Florida Public Service Commission
Division of Clerk and Administrative Services
Individual water meters, Public Comment
August 13, 2003

Further, the additional plumbing, piping and connections necessitated by individual metering causes added liability from a number of standpoints, not the least of which are potential leaks as well as inefficiencies in engineered plumbing systems. Such systems include complicated pressure boosting, and reductions per floor which become much harder to engineer and manage efficiently in the individual meter scenario. I have enclosed a white paper and graphic exhibit from of BCBE Construction, (Mr. Rowland Hand) which further speaks to this issue. Wadsworth- O'Neal (Mr. Ed O'Neal) also contributes his opinion.

Also attached for your review is an opinion from Truglio, Wei, and Ramos, Consulting Engineers Inc.(Mr. Joseph Truglio), as well as Mr. O'Neal which also addresses the inequities in this proposal as they apply to efficient and responsible engineering in this type of structure, particularly addressing the space requirements, and the myriad of other logistical issues.

Further, this would pose building security nightmares in condominium buildings, which traditionally (and as a matter of practice) limit access to the building and demising levels to anyone who does not reside there. Access by outsiders for meter reading and maintenance of this equipment is not consistent with a secure building environment. This can not be overstated as a potential liability issue.

Further, for those projects which may be directed at the large statewide backlog for affordable housing units, the entire process of individual metering appears to be at cross purposes to that mission. The high cost of individual meters would most likely be a further deterrent to the few providers in that price range. Particularly in mid and high rise construction, which is already so expensive to build. The economies of the proposal simply are not conducive to affordability. They add cost to the process.

The suggestion that the practice of individual metering should be a statewide mandate, on the basis of the dubious claim that it would result in water conservation should not be seriously considered. The data that is available on this subject does not conclusively support this premise. In fact, it is mostly anecdotal in nature, and presumes a certain behavior on high rise residents that can not be supported in fact.

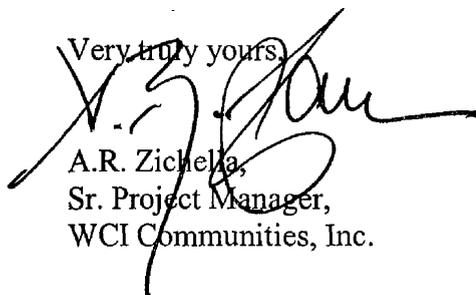
When one factors in the high additional costs, inefficiencies of construction, compromised engineering practices, and plethora of security and liability issues, it is not evident that a mandate or even an advisory supporting this practice is a sound proposition.

Florida Public Service Commission
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It is the position of WCI Communities, Inc., our many consultants and engineering professionals, as well as many others in the building community that individual water metering in mid and high rise construction should not be mandated, or even recommended. The many detriments far outweigh the few highly suspect alleged benefits. We urge you to consider our position, including the attached supporting comments.

Thank you for the opportunity to comment on this important issue.

Very truly yours,



A.R. Zichella,
Sr. Project Manager,
WCI Communities, Inc.

CC: Mr. Rowland Hand, VP, Boran, Craig, Barber, Engel Construction, Inc
Mr. Joseph A. Truglio, PE, Truglio, Wei, & Ramos, Consulting Engineers
Mr. Michael Agnoli, Architect, Robert M. Swedroe, Architects
Mr. Ed O'Neal, PE, Wadsworth, O'Neal Engineering



White Paper

Multi-family Water Metering

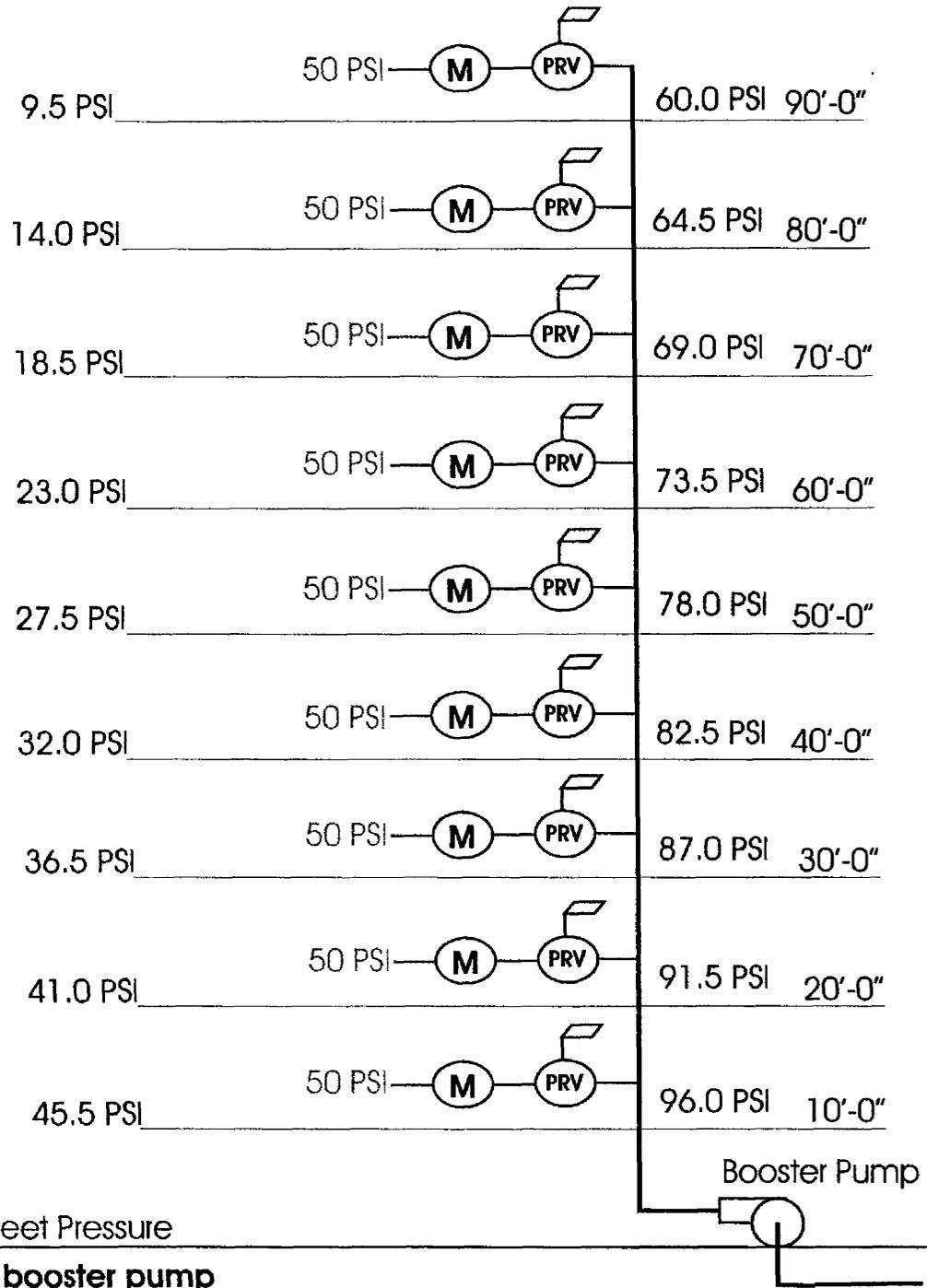
Rowland C. Hand, Director of Technical Services

Boran Craig Barber Engel Construction Co., Inc.

Providing individual apartment or condominium water metering, especially in buildings over 3 or 4 stories in height, is problematic and questionable in terms of encouraging reductions in usage. As a large general contractor and having built thousands of condominiums in Florida, we are concerned about the total impact on our environment with the projects we construct. Mid-rise and high-rise condominiums by their very nature tend to be least impactful and most efficient stewards of our environment especially when compared to single-family homes. Single-family homes typically are large users of water for lawn irrigation versus multi-family where irrigation is relatively minor. It is unlikely that the residents of a condominium will flush less, take shorter showers or run fewer loads of wash or dishes because they receive an individual water bill. A typical condominium unit only consumes between 2000 and 5000 gallons per month, which if individually metered, represents only \$10.00 to \$20.00 in cost.

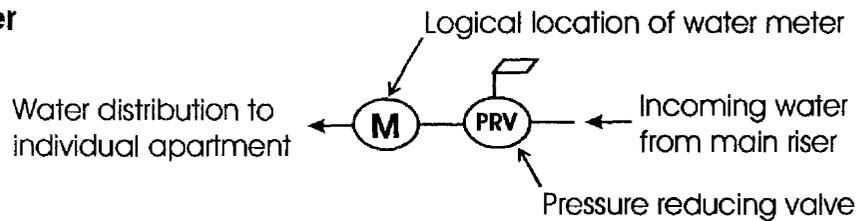
Areas of concern for multi-family water metering:

1. Pressure relationships are problematic in buildings greater than 2 to 3 stories in height. Pressures drop with elevation and therefore taller buildings must be equipped with booster pumps to provide adequate and consistent pressures to each unit on all floors. See the attached graphic relationship illustrating typical pressures in a 10-story building. The individual utility water meters must be located on the "downstream" side of the booster pump in order to maintain adequate pressures to each residence. At the same time, the Florida Building Code – Plumbing, limits the pressure to 80 PSI; therefore, a pressure-reducing valve must be installed in-line to reduce pressures to a safe code complying level.
2. The meters will end up being located within the building, raising questions regarding access and responsibility. The servicing utility could be held liable for damages should a leak occur at the meter location.
3. Individual metering eliminates the possibility of utilizing central hot water heating systems. Central hot water systems typically utilize clean burning natural gas and are far more efficient than multiple electric water heaters; therefore, individual metering could cause increased depletion of other natural resources and increase pollution.
4. Since most water consumption rate structures are of a tiered progressive nature, that is, the more used - the higher the unit cost, the installation of multiple small meters charging at the lower end of the rate structure could actually encourage more water consumption. The large water bills received by a condominium association on a single meter, combined with education, may be the best incentive to reduce water usage.



Grade - 50 PSI Street Pressure

Pressure without booster pump
 Pressure to apartment after PRV
 Pressure in main supply riser



Typical 10 Story Domestic Water Distribution with Individual Water Meters

ROBERT M. SWEDROE | ARCHITECTS & PLANNERS



August 13, 2003

RE: Multi-Family Water Metering

To Whom It May Concern:

We are an architectural firm based in Florida that has been involved in the design and construction of hundreds of multi-family, mid- and high-rise condominium projects for over 25 years. We cannot support any effort to mandate individual water meters for newly constructed, mid- and high-rise condominiums.

For buildings of this type, a central hot water heating system has proven to be more efficient than individual water heaters for each unit which would be required by the mandate for individual metering. For this reason alone, we cannot support this type of legislation.

Sincerely,

Michael Agnoli, Architect
Partner & Director of Design

MA/jsp

WADSWORTH - O'NEAL ENGINEERING, INC.

Mechanical and Electrical Engineers

6315 Presidential Court, Suite A, Fort Myers, Florida 33919
(239) 454-5511 FAX (239) 454-5401

August 13, 2003

State of Florida
Public Service Commission
2540 Schumard Oak Boulevard
Capital Circle Office Center
Tallahassee, Florida 32399-0850

Re: Individual Water Metering of Mid- and High-rise Residential Buildings

To The Commission,

I am a Florida Registered Professional Engineer. I have designed and assisted in the construction of more than 200 mid and high-rise residential buildings (primarily condominiums), most of which are located in Collier, Lee, Charlotte, Manatee, Sarasota, Pinellas and Hillsboro Counties.

I have considered the question discussed during your August 7th workshop of providing individual water metering for mid and high-rise buildings. My observations and comments are provided below for your consideration.

Water Conservation:

Certainly any reasonable effort to conserve water use in these buildings is worthy of careful consideration. However, the residences in a high-rise building consume far less water than would a normal single-family residence. They have no swimming pool, no car washing, no irrigation, much lighter occupant density and only infrequent washing of small pets.

By far the greater opportunity for water conservation lies in the "common" uses, the swimming pool, irrigation (second use water is not typically used because of staining problems), and especially air conditioning system water cooling towers. I suggest that the commission evaluate separate metering but only one meter for all of the apartments and one meter for the common building usage. I believe this approach will result in the most effective and wisest use of our precious water resources.

Energy Efficiency:

Since clean burning and efficient natural gas is now available on Florida's West coast, many of the best developers and the most demanding condominium buyers are exploiting the energy efficiency of central gas water heating systems. Use of such systems would be unfeasible if individual water metering for each apartment were employed.

Additional energy consumption will be required to offset the additional pressure drop of the metering equipment.

A great deal of water and energy as well is often wasted when occupants allow water to run until hot water arrives at the master bath shower. Perhaps a requirement for hot water re-circulation systems should be considered.

Maintenance and Liability:

Your August 7th workshop discussions contemplated a requirement of "... individual meters owned and maintained by the utility for each separate occupancy unit . . .". In order to secure access to the water ahead of the meter, the utility company would have to install (or have installed for them) and maintain all of the piping and equipment (pressure booster pumping system, and pressure reducing valves) up to and through the water meter.

I could envision some real difficulties here, such as who is called in the event of unsatisfactory booster system operation, not to mention who will be held liable for damages to the building (and the occupant's million dollar paintings) resulting from a failure of the utility company piping and/or apparatus.

Should you have any questions, please feel free to contact me.

Sincerely,

Edward J. O'Neal, P.E., Pte.

ROBERT M. SWEDROE | ARCHITECTS & PLANNERS



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