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April 29, 1997
VIA HAND DELIVERY

Blanca S. Bayo, Director
Division of Records and Reporting
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, FL 32399-0850

Re: Mad Hatter Utilities, Inc.; Docket No. 960576-WS
Application for Amendment of Water and Wastewater Certificates
Our File No. 28023.06

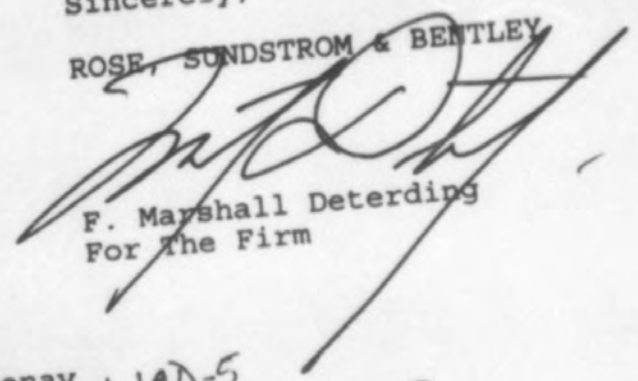
Dear Ms. Bayo:

Attached are the original and 15 copies of the rebuttal testimony and exhibits of Larry G. DeLucenay, Robert C. Nixon, CPA, and Edwin J. Rogers, P.E. submitted on behalf of Mad Hatter Utility, Inc. in the above-referenced docket.

Should you have any questions in this regard, please let me know.

Sincerely,

ROSE, SUNDBSTROM & BENTLEY



F. Marshall Deterding
For The Firm

- ACK _____
- AFA _____
- APP _____
- CAF _____
- CMU _____
- CTR _____
- EAG _____
- LEG _____
- 3408 LIN _____
- OPC _____
- RCH _____
- SEC _____
- WAS _____
- OTH _____

FMD/lts
Enclosures

cc: Mr. Larry DeLucenay
Maps exp LGD-5
WAW
Matilda

DOCUMENT NUMBER-DATE
04309 APR 29 5
FPSC-RECORDS/REPORTING

Nixon
DOCUMENT NUMBER-DATE
04310 APR 29 5
FPSC-RECORDS/REPORTING

DOCUMENT NUMBER-DATE
04311 APR 29 5
FPSC-RECORDS/REPORTING

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1 BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

2 DOCKET NO. 960576-WS

3 MAD HATTER UTILITY, INC.

4 APPLICATION FOR AMENDMENT OF CERTIFICATE

5 NOS. 340-W AND 297-S IN PASCO COUNTY

6 PREFILED REBUTTAL TESTIMONY OF EDWIN J. ROGERS, P.E.

7 Q Please state your name and employment address.

8 A My name is Edwin J. Rogers. I am a principal in the
9 engineering firm of Towson-Rogers Engineering, Inc., and
10 my address is 5514 7th Street, Zephyrhills, Florida
11 33540.

12 Q Have you prepared a resume of your training experience in
13 the engineering field related to water and wastewater
14 utilities?

15 A Yes, I have. That is attached hereto as Exhibit EJ-1.

16 Q What is the purpose of your testimony here today?

17 A To provide some response to the direct testimony provided
18 by Pasco County witnesses and to generally provide my
19 professional opinion concerning the ability of Mad Hatter
20 Utility, Inc. to provide water and wastewater service to
21 the area proposed in this PSC application for extension
22 of service territory. I have attached hereto a memoran-
23 dum which I have prepared analyzing the facts and
24 circumstances surrounding Mad Hatter's existing water and
25 wastewater service to its current territory, those areas

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FPSC-RECORDS/REPORTING

1 where it is currently serving outside its territory and
2 its ability to serve all of those areas plus the addi-
3 tional proposed extension areas where no service is
4 currently provided. I have also addressed what will be
5 necessary for the Utility to do in order to meet these
6 needs for service. This analysis is contained in detail
7 in the attached Memorandum dated April 29, 1997, from me
8 to you as the Utility's counsel (Exhibit EJR-2) and the
9 statements therein are effectively my testimony on the
10 subject.

11 Q Have you drawn a conclusion as to Mad Hatter's ability to
12 serve in comparison to that of Pasco County?

13 A Yes. I believe that Mad Hatter is in the best position
14 to provide this water and wastewater service. This is
15 based upon an analysis of both the existing Mad Hatter
16 system and the existing County system and the fact that
17 Mad Hatter has facilities immediately adjacent to each
18 and every one of the proposed service territories where
19 they are not already providing service. To the extent
20 Mad Hatter Utility is already providing service, obvious-
21 ly Mad Hatter is in the best position to serve. Since it
22 has existing facilities, any proposal to provide service
23 through any other utility would involve duplication of
24 those existing facilities.

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Q Do you have any other comments to provide in this regard?

A No. I do not.

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TOWSON-ROGERS ENGINEERING, INC.
PROFESSIONAL DESIGN FIRM

BIOGRAPHICAL DATA

EDWIN J. ROGERS, P.E.

Vice President

EDUCATION:

Bachelor of Science Degree in Civil Engineering, University of South Florida, Tampa, Florida, 1991

Master of Science Degree in Civil Engineering, University of South Florida, Tampa, Florida, 1993

PROFESSIONAL REGISTRATION:

Florida Registered Professional Engineer #50082

PROFESSIONAL ASSOCIATIONS:

Water Environment Federation

PROFESSIONAL ACTIVITIES:

Adjunct Instructor, Department of Civil and Environmental Engineering, University of South Florida, Fall Semester, 1996

EXPERIENCE:

September 1996 to Present: Towson-Rogers Engineering, Inc., Zephyrhills, FL, Vice President/Secretary. Responsible for coordination of design work and daily operations of the office. Coordinates sub-consultants in various disciplines, as well as in-house staff in the design and permitting process. Provides personal attention to clients' needs during the design process. Provides engineering design and permitting services for commercial and industrial sites, utility installations, water and wastewater treatment systems, and solid waste management systems.

January 1993 to September 1996: Chastain-Skillman, Inc., Lakeland, FL, Environmental Engineer. Responsible for design and permitting of wastewater and water treatment systems, utility installations, and solid waste management facilities. Responsibilities included coordination of environmental and hydrogeological sub-consultants as well as in-house hydrogeological, surveying, and drafting staff. Provided personal attention to clients' needs during the design and permitting process. Also provided construction contract administration and assisted in preparation of bid documents.

January through December 1992: University of South Florida, Tampa, FL, Research Assistant. Assisted major professor in solid waste-related research projects, prepared plans and specifications for a field pilot model landfill, assisted professors in evaluation of student performance.

May through December 1991: Bromwell and Carrier, Inc., Lakeland, FL, Staff Engineer. Design and/or permitting-related services for subdivisions, public works projects, and phosphate mine reclamation. Responsibilities included watershed modeling and analysis, design, coordination of drafting staff, and coordination with regulatory agencies.



TOWSON-ROGERS ENGINEERING, INC.
PROFESSIONAL DESIGN FIRM

BIOGRAPHICAL DATA

EDWIN J. ROGERS, P.E.
Vice President

ADDITIONAL INFORMATION **EXPERIENCE**

1989 through April 1991. Towson-Rogers Engineering, Inc., Zephyrhills, FL, Junior Engineer. Began as entry level CADD operator. Progressed to engineers' assistant and became responsible for performing storm-water management calculations, drainage studies, grading design, and analysis of water distribution systems using analytical software.

PARTIAL LIST OF CLIENTS, PROJECTS, AND SERVICES RENDERED:

ROBINSON ORANGE PARK: Responsible for design and permitting of a wastewater treatment plant expansion for this mobile home community. Prepared engineering reports, construction plans, and other documentation necessary to expand the existing wastewater treatment plant and effluent disposal system from a permitted capacity of 10,000 gallons per day (gpd) to 21,000 gpd. Directed design and drafting staff as well as surveying and geotechnical sub-consultants. Coordinated with regulatory agencies.

HOLLOWAY POOLS, INC.: Responsible for design and permitting of a site to accommodate a 7,000 square-foot industrial/commercial facility. Site features include 2 acres of construction including parking and storm-water management facilities. Project coordination included designing and permitting the facility, directing sub-consultants in various disciplines, directing in-house drafting and design staff, and close coordination with the client and regulatory agencies.

TOMOKA HEIGHTS WASTEWATER TREATMENT PLANT: Responsible for design and permitting of a 100,000 gpd expansion of an existing 100,000 gpd wastewater treatment facility for Highlands County, Florida. Directed in-house hydrogeological and drafting staff, coordinated closely with the client and regulatory agencies.

CITY OF FROSTPROOF WATER LINE EXTENSION: Responsible for design and permitting of a 9,000-foot water distribution system expansion for the City of Frostproof under the Florida Water Quality Improvement Trust Fund. Prepared construction plans, permitting documents, and bid documents for the project. Coordinated with in-house staff, the client, and regulatory agencies. Provided construction contract administration services during project construction.

MEMORANDUM

Date: April 29, 1997

From: Edwin J. Rogers, P.E., Towson-Rogers Engineering, Inc.

To: Mr. F. Marshall Deterding, Esq., Rose Sundstrom Bentley

Subject: Mad Hatter Utility

I have had an opportunity to review the prefiled testimonies of Messrs. Douglas Bramlett and John Gallagher of Pasco County, Mr. Joseph Squitieri of the Florida Department of Environmental Protection, and Mr. Larry G. Delucenay of Mad Hatter Utility, Inc. I have also had an opportunity to review a color-coded map, which I believe is the same one referred to in Mr. Bramlett's testimony as "Exhibit 3" to the 1992 agreement between the County and Mad Hatter. This map depicts the additional service areas requested by Mad Hatter in relationship to existing County water and sewer lines. I also reviewed two maps of the same area which were supplied to me by Mr. Delucenay. These maps depicted Mad Hatter's water and sewer lines. I also met with Mr. Delucenay to go over specific information with regard to his water and sewer systems.

Based upon my review of the maps and my conversations with Mr. Delucenay, and upon my analysis of the systems, it is my opinion that Mad Hatter Utility, Inc. is well-positioned to serve south-central Pasco County with water treatment and distribution as well as wastewater collection and transmission service along the State Road 54 corridor from U.S. 41 east to Carpenter's Run subdivision and in the vicinity of the 54/41 intersection and the Dale Mabry/41 apex. Visual inspection of the maps and preliminary calculations suggest that Mad Hatter is in a better position to serve this area than is the County. The following are my thoughts on the status of County and Mad Hatter water and wastewater facilities in this area.

Wastewater

Starting from the west side of Mad Hatter's area and working east, my thoughts are as follows:

In Mr. Bramlett's Testimony, he states that, conservatively, the areas requested by Mad Hatter (i.e., tracts A-4, B-27, B-23, B-24, B-26, B-25, C-9, C-8, and C-6A) are estimated to add a total of 436,000 gallons per day of sewage to that which Mad Hatter currently handles. Based on my calculations, which are shown on the attached spreadsheet, the requested areas add an estimated 361,000 gpd to Mad Hatter's system at build-out. The difference in the figures stems from Mr. Bramlett's use of the maximum allowable density for all calculations. For example, if the land use is RES-9 (nine units per acre), Mr. Bramlett multiplied the acreage by nine. In my calculations, I assumed lesser



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values, as it is usually not practical to build to maximum density because of the need for retention areas, common areas, access, and for conservation concerns where wetlands or surface waters are involved. However, both figures are within reasonable "textbook" values. Mr. Bramlett's flow values corresponds to approximately 1,226 gallons per day per acre, and my calculation corresponds to about 1,016 gallons per day per acre. A generally accepted principle is that undeveloped urban lands can be expected to generate between 500 and 1,500 gpd/acre at buildout.

Mad Hatter Utility currently owns and operates the Lake Linda Groves wastewater treatment plant, with permitted capacity of 20,000 gallons per day (gpd). With the recent addition of Lake Linda Circle Mobile Home Park, the plant has a committed capacity of 17,000 gpd, based upon our in-house records. However, other tracts in the area, such as tract B-27, a parcel known as Moss View with an area of approximately 190 acres, can be conveniently served through Mad Hatter's existing infrastructure in Cypress Cove. A 6-inch force main is stubbed across the U.S. 41 right-of-way from Cypress Cove. This same force main could conveniently serve tracts B-24 and B-26. According to the color-coded map, the County has no existing sewer infrastructure which could serve these areas as conveniently as Mad Hatter Utility.

Moving east, Mad Hatter has a 16-inch force main on the south side of State Road 54. From about 0.5 miles east of 41 to the intersection of 54 and Livingston. For analytical purposes, with an eye toward comparing the County's system with Mad Hatter's, I made the assumption that it is desirable to have a velocity no greater than 6 feet per second (fps) in a force main. This value is often used in master planning studies to assess system capacities. Based on this assumed velocity, Mad Hatter's 16-inch force main has a peak capacity of 5.4 MGD, or about 2.7 MGD at average conditions. In contrast, the County's force main, located on the north side of 54, is 8-inches in diameter. Based on the 6 fps velocity criteria at peak, this line has a peak capacity of 1.35 MGD, or 0.677 at average conditions. Further, this line does not extend east of Collier Parkway, as does Mad Hatter's. Mad Hatter's line in this area not only has more than double the capacity of the County's, but it also has several stubbed-out lines to key properties, positioning it well for service to the area.

East of the intersection of Livingston, the Mad Hatter force main reduces to 12-inches in diameter for a corresponding capacity of 3.05 MGD at peak conditions or 1.52 at average conditions. This line runs east to Carpenter's Run subdivision. The County proposes a 10-inch force main along this alignment, but has no existing lines. From Carpenter's Run eastward, the County has a 10-inch force main. Utilizing the previously-established velocity criteria, this corresponds to a flow capacity of 2.12 MGD at peak flow or 1.06 MGD at average daily flow. It should be noted that the County has plans to divert flow from the Land O' Lakes wastewater facility to the

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Wesley Chapel facility once it is completed. This will use a portion of the available capacity in this 10-inch line. This makes the Mad Hatter 12-inch force even better positioned to serve the needs of the vicinity.

Again, from the perspective of existing collection and transmission infrastructure, it appears that the S.R. 54 corridor from U.S. 41 to Carpenter's Run is best served by Mad Hatter Utility. From the standpoint of treatment capacity, Mad Hatter can effectively serve this area if the County allocates additional treatment capacity to the Utility once the Wesley Chapel plant is completed. Alternatively, Mad Hatter could provide the treatment for these areas by constructing new plants. As a Public Service Commission regulated utility, Mad Hatter has condemnation authority and can, therefore, acquire the land for this purpose. Mad Hatter has a history of growing with the community and planning for expansions by coordinating with developers. Expansions are made carefully and prudently, as the utility would be imprudent to construct significant expansions in advance of a demonstrated demand.

It should be noted that Mad Hatter already has infrastructure in place for reuse of reclaimed water for irrigation at Twin Lakes and Turtle Lakes. Reclaimed water mains are extended into these developments and, according to the Utility, polyethylene services are extended to each lot. This demonstrates the Utility's prudent planning to meet the goal of the State to use the lowest quality water source available for irrigation and the companion goal of eliminating discharge of treated wastewater effluent into the environment. Mad Hatter could serve these lots with reclaimed water by constructing a public access reuse wastewater treatment plant. These plants must be at least 100,000 gpd in permitted capacity in accordance with Chapter 62-620, F.A.C. The Utility indicates that it is feasible to plan for construction of a facility that could be constructed and expanded in 100,000 gpd increments as the demand warrants.

Water

Mad Hatter Utility currently operates six (6) water treatment plants to provide potable water to its service area. There is a water plant in Linda Lake Grove which has a 5,000 gallon hydropneumatic tank. It is capable of serving the Linda Lake Grove subdivision, the adjacent church, and the recently connected Lake Linda Circle Mobile Home Park.

The Utility operates two water plants just east of U.S. 41 near the Dale Mabry apex at Foxwood and Cypress Cove. These two plants, which are identical, feature 10,000 gallon per day hydropneumatic tanks and are fully interconnected and looped. These plants are well-positioned to conveniently serve the tracts B-23, B-24, and B-26, as an 8-inch PVC line is stubbed across U.S. 41 to these areas. By extension, this system also

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could serve tract B-27. This places Mad Hatter in a much better position to serve these tracts than the County, as there are no existing County water lines shown on the color-coded map. According to Mad Hatter, the only County water facility in this area is a small well associated with the U-Save shopping center. Apparently, only two-inch lines extend from this facility.

Moving east, Mad Hatter has water infrastructure available along S.R. 54 in the vicinity of Livingston. Eight-inch lines are strategically stubbed to various parcels. These lines extend from the Turtle Lakes plant on the north side of 54 and Twin Palms on the south side of 54. These plants each have 10,000 gallon hydropneumatic tanks and 40 HP pumps and are fully interconnected and looped with one another. These lines are convenient to the C-8, C-9, and C-6A parcels. These plants and lines also lay the basis for future extensions westward along 54 to Collier Parkway.

Mad Hatter also operates a water plant in Carpenter's Run which could feasibly serve C-6A. The Utility plans to eventually interconnect this plant with the Turtle Lakes/Twin Palms system. It features a 12-inch well with a 60 HP pump.

Incidentally, Mad Hatter already has designs available for additional wells and tanks at both Carpenter's Run and Turtle Lakes. These additional facilities were designed by Towson-Rogers Engineering, Inc. within the last two or three years and could literally be taken "out of the drawer" and submitted for permitting. The systems could be expanded on relatively short order using these plans.

In short, it appears, based upon my review of the documents available to me, that Mad Hatter Utility is well positioned to serve the areas in question. The Utility is better equipped to serve the areas in question and on shorter order, than is Pasco County. Mad Hatter's service to the area would seem to be in keeping with the current national trend toward privatization.

**Mad Hatter Utility
Flow Projection - Requested Areas**

| Parcel | Approx. Area (Ac.) | Land Use | Actual or Proposed Use (If Known) | Assumed Flow | Total Flow |
|----------------------|--------------------|-----------|-----------------------------------|-------------------|---------------|
| A-4 | 5 | RES-8 | Church | 1000 gpd | 1000 |
| B-27 | 190 | RES-8 | Assume Res. - 950 lots | 200 gpd/lot | 190000 |
| B-27 | 1.5 | IH/IL | Strip Mall | 1,500 gpd/acre | 2250 |
| B-24 | 34 | IH/ROR | Assume Commercial | 1,500 gpd/acre | 51000 |
| B-26 | 20 | RES-9 | Assume Res. - 120 lots | 200 gpd/lot | 24000 |
| B-25 | 50 | RES-8 | Assume Res. - 250 lots | 200 gpd/lot | 50000 |
| C-8 | 13 | RES-8 | Church | 1000 gpd | 1000 |
| C-8 | 22 | ROR/RES-8 | Assume Res. - 110 | 200 gpd/lot | 22000 |
| C-8A | 20 | ROR | Assume Commercial | 1000 gpd/acre | 20000 |
| Total Acreage | 355.5 | | | Total Flow | 361250 |