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VALERIE L. LORD

October 12, 2004

HAND DELIVERY

Ms. Blanca Bayo
Commission Clerk and Administrative Services Director
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, FL 32399

Re: Docket No. 03-0123-WS; Application for Transfer of Majority Organizational Control to Grenelefe Resorts, LLC, and Name Change
Our File No.: 37058.01

Dear Ms. Bayo:

Enclosed for filing in the above-referenced docket is an Original Cost Study prepared by Sheffield Engineering & Associates, Inc., of the water, wastewater and irrigation systems of Grenelefe Utilities, Inc. Also enclosed is the calculation of rate base as of June 30, 2002, and the appropriate depreciation schedules upon which the calculation was determined.

Very truly yours,

MARTIN S. FRIEDMAN
For the Firm

CMP ____
COM ____
CTR ____
ECR ____
GCL ____
OPC ____
MMS ____
RCA ____
SCR ____
SEC 1
OTH ____

MSF/mp
Enclosures

cc: Mr. Fravy Callazo (w/o enclosure)
Mr. Javier Cintron (w/o enclosure)
Robert Nixon, CPA (w/o enclosure)
Ms. Cheryl Johnson (w/enclosure) (via hand delivery)

M:\1 ALTAMONTE\GRENELEFE UTILITY\SPORTS SHINKO UTILITY\PSC Clerk (Bayo) 05.ltr.wpd

ORIGINAL

Original Cost Study
of
Drinking Water Distribution System
Wastewater Collection System and
Irrigation System

Grenelefe Utilities, Inc.

3200 State Road 546
Haines City, Florida 33844

October 5, 2004

10/6/04

Michael P. Bahor, PE Date
PE # 0054915

Prepared by

S.E.A.

SHEFFIELD ENGINEERING & ASSOCIATES, INC.

ENVIRONMENTAL AND CIVIL ENGINEERING SERVICES
4322 ANDERSON ROAD • ORLANDO, FLORIDA 32812
PH: 407-658-0512 • FAX: 407-482-5691 • TOLL FREE: 800-443-8860

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1.0 INTRODUCTION

This report is being written in order to ascertain the original costs of the potable water distribution system, sewage collection system and irrigation system owned and operated by Grenelefe Utilities within Polk County, Florida. The original cost of the Water Treatment Facilities, Wastewater Treatment Facility and Wastewater Transmission System are discussed in the Summary section of this report and the associated reports attached in Appendices B and C.

Grenelefe Utilities is located in Polk County east of Haines City and West of Lake Marion. The general location of Grenelefe utilities is indicated in Figure 1. Actual site drawings detailing the facilities associated with this cost study are delineated in Appendix A.

The object of this report is to determine the original cost of the potable water distribution system, sewage collection system and irrigation systems not included with the water and wastewater treatment plant facilities including force mains and lift stations not included in the 1993 original cost studies (Appendices B and C). The original cost of these facilities included in this study were calculated either by original records obtained from Grenelefe Utilities accounting office, utilizing RSMeans Building Construction Cost Data 61st Annual Edition dated 2003 or utilizing a current construction estimate and factoring the RS Means calculation for the original construction date.

2.0 DISCUSSION

This report is consistent with sound engineering principals and good accounting procedures. Sheffield Engineering personnel preparing this report are very familiar with the site facilities located at the Grenelefe Resort. In addition, Sheffield Engineering personnel reviewed these facilities in detail prior to the preparation of this report.

The cost estimates that follow in Tables 1-3 and as delineated in the associated site drawings were obtained from either the Grenelefe Resort and Conference Center accounting office (Rudy Arceo), Grenelefe Utilities Manager (Patrick Henry) or using the best professional techniques available for studies of this nature. The data contained in Tables 1-3 were basically obtained as follows:

1. Grenelefe Resorts and Utilities files.
2. Field inspections at the facilities.
3. File copies of As-built Plans.
4. RSMeans Building Construction Cost Data 61st Annual Edition dated 2003 or utilizing a current construction estimate and factoring the RS Means calculation for the original construction completion date.
5. Sheffield Engineering and Associates, Inc. in-house recent construction cost estimates from similar projects and predicated on 30 years of experience in the civil site design and construction field.

For this report, a 10% general and administrative (G&A) cost was added to the original cost calculated for these facilities. This G&A cost reflects company overhead, legal fees, construction interest, preliminary cost and other associated cost of which Grenelefe Utilities has used its funds. In addition, a 6% engineering design and inspection cost was added to the total adjusted original cost for these facilities. The following original costs were based on the completion dates provided to Sheffield Engineering by Grenelefe resort and Utilities.

3.0 POTABLE WATER DISTRIBUTION SYSTEM

Table 1 includes the original cost of the potable water distribution system not included with the Water Treatment Facilities Original Cost Study conducted in 1993 (Appendix B). The potable water distribution system consists of distribution lines, valves, hydrants, service lines and meters, etc. located outside the WTP property boundaries. Figure PW in Appendix A delineates the locations of the items used to calculate the cost of these facilities in Table 1.

TABLE - 1

Grenelefe Utility Potable Water System Cost Estimate

ref: 2003 RSMeans "Building Construction Cost Data"
July 15, 2004

Water Line Unit Costs

									2003 Prices Orlando 83.4	Lakeland 79.6	Grenelefe 81
PVC Pipe	$/LF	Excavation	$/cy	$/lf	Backfill	$/unit	$/lf	Total $/LF			
2"	Estimated							$8.00	$6.67	$6.37	$6.48
4"	$8.65	4-6 ft deep	$4.94	$0.75	8"x12" deep	$0.58	$2.32	$11.72	$9.77	$9.33	$9.49
6"	$13.15	4-6 ft deep	$4.94	$1.10	8"x12" deep	$0.58	$2.32	$16.57	$13.82	$13.19	$13.42
8"	$21.50	4-6 ft deep	$4.94	$1.65	8"x12" deep	$0.58	$2.32	$25.47	$21.24	$20.27	$20.63
10" DI	$29.00	6-10' deep	$3.32	$1.47	8"x12" deep	$0.58	$2.96	$33.37	$27.83	$26.56	$27.03
Valves	$/LF	Excavation	$/cy	$/each	Backfill	$/unit	$/each	Total $/ea.			
2"	Estimated							$100.00	$83.40	$79.60	$81.00
4"	$570.00	4-6 ft deep	$4.94	$4.94	8"x12" deep	$0.58	$9.28	$584.22	$487.24	$465.04	$473.22
6"	$745.00	4-6 ft deep	$4.94	$4.94	8"x12" deep	$0.58	$9.28	$759.22	$633.19	$604.34	$614.97
8"	$1,150.00	4-6 ft deep	$4.94	$9.88	8"x12" deep	$0.58	$9.28	$1,169.16	$975.08	$930.65	**$947.02**
10" DI	$1,450.00	6-10' deep	$3.32	$9.96	8"x12" deep	$0.58	$13.92	$1,473.88	$1,229.22	$1,173.21	$1,193.84
Fire Hydrant (Incl. valve)	$1,400.00	est	$4.94	$19.76	8"x12" deep	$0.58	$9.28	$1,429.04	$1,191.82	$1,137.52	$1,157.52
Service Connection	$100.00	20' avg length						$100.00	$83.40	$79.60	$81.00
Meters	$	Units						Total $/ea.			
3/4"	$107.00	each						$107.00	$89.24	$85.17	$86.67
1"	$141.00	each						$141.00	$117.59	$112.24	$114.21
1.5"	$420.00	each						$420.00	$350.28	$334.32	$340.20
2"	$530.00	each						$530.00	$442.02	$421.88	$429.30
3"	$2,400.00	each						$2,400.00	$2,001.60	$1,910.40	$1,944.00
6"	$5,575.00	each						$5,575.00	$4,649.55	$4,437.70	$4,515.75

Water Line Costs

	$/Unit	Units	# of Units			Construction Costs per Unit (In 2003 Dollars)			Construction Costs per Year (Projected Original Costs)		
			1978	1983	1989	1978	1983	1989	1978	1983	1989
PVC Pipe									41.1	61.6	70.8
2"	$6.48	L ft	1402	744	1620	$9,084.96	$4,821.12	$10,497.60	$4,609.78	$3,666.43	$9,175.68
4"	$9.49	L ft			1451	$0.00	$0.00	$13,774.63	$0.00	$0.00	$12,040.05
6"	$13.42	L ft	3564	2315	7019	$47,834.94	$31,071.24	$94,206.91	$24,271.80	$23,629.48	$82,343.82
8"	$20.63	L ft		21468	8737	$0.00	$442,899.87	$180,250.43	$0.00	$336,822.62	$157,552.22
10"	$27.03	L ft	3381	901		$91,387.42	$24,353.76	$0.00	$46,370.65	$18,520.88	$0.00
Valves											
2"	$81.00	each	4	2	1	$324.00	$162.00	$81.00	$164.40	$123.20	$70.80
4"	$473.22	each	0	0	3	$0.00	$0.00	$1,419.65	$0.00	$0.00	$1,240.86
6"	$614.97	each	7	1	13	$4,304.78	$614.97	$7,994.59	$2,184.28	$467.68	$6,987.86
8"	$947.02	each	14	30	12	$13,258.27	$28,410.59	$11,364.24	$6,727.35	$21,606.08	$9,933.18
10"	$1,193.84	each	4	1	0	$4,775.37	$1,193.84	$0.00	$2,423.06	$907.91	$0.00
Fire Hydrant (Incl. valve)	$1,157.52	each	21	30	16	$24,307.97	$34,725.67	$18,520.36	$12,334.04	$26,408.66	$16,188.17
			(1/3 per yr. complete)								
Service Connections	$81.00	each	415	415	415	$33,615.00	$33,615.00	$33,615.00	$17,056.50	$25,564.00	$29,382.00
Meters											
3/4"	$86.67	each	404.3	404.3	404.3	$35,040.68	$35,040.68	$35,040.68	$17,779.90	$26,648.22	$30,628.15
1"	$114.21	each	5.3	5.3	5.3	$605.31	$605.31	$605.31	$307.14	$460.34	$529.09
1.5"	$340.20	each	3.3	3.3	3.3	$1,122.66	$1,122.66	$1,122.66	$569.65	$853.78	$981.29
2"	$429.30	each	4	4	4	$1,717.20	$1,717.20	$1,717.20	$871.32	$1,305.92	$1,500.96
3"	$1,944.00	each	0.33	0.33	0.33	$641.52	$641.52	$641.52	$325.51	$487.87	$560.74
6"	$4,515.75	each	0.67	0.67	0.67	$3,025.55	$3,025.55	$3,025.55	$1,535.19	$2,300.91	$2,644.56
	Total					$271,045.63	$644,020.98	$413,877.33	**$137,530.56**	**$489,773.98**	**$361,759.45**

Total Original Cost **$989,063.99**

General and Administrative (G&A) Cost 10% $98,906.40

Engineering Design and Inspections 6% $59,343.84

Grand Total Original Cost **$1,147,314.23**

4.0 DOMESTIC WASTEWATER COLLECTION SYSTEM

Table 2 includes the original cost of the wastewater collection system not included with the Wastewater Treatment Facilities Original Cost Study conducted in 1993 (Appendix C). The wastewater collection system consists of distribution lines, manholes and service lines located outside the WWTP property boundaries. Figure SS in Appendix A delineates the locations of the items used to calculate the cost of these facilities in Table 2.

TABLE - 2

Grenelefe Utility Domestic Sewer System Cost Estimate

ref: 2003 RSMeans "Building Construction Cost Data"
July 15, 2004

Sewer Line Unit Costs

									2003 Prices Orlando	Lakeland	Grenelefe
									83.4	79.6	81
PVC Pipe	$/LF	Excavation	$/cy	$/lf	Backfill	$/cy	$/lf	Total $/LF			
8"	$7.95	6-10' deep	$3.32	$1.96	8"x12" deep	$0.58	$4.64	$14.55	$12.13	$11.58	$11.79
Manholes	$1,525.00	8' deep complete						$1,525.00	$1,271.85	$1,213.90	$1,235.25
Service Connection	$100.00	20' avg length						$100.00	$83.40	$79.60	$81.00

Sewer Line Costs

			# of Units			Construction Costs per Unit (In 2003 Dollars)			Construction Costs per Year (Projected Original Costs)		
PVC Pipe		Units	1978	1983	1989	1978	1983	1989	1978 41.1	1983 61.6	1989 70.8
8"	$11.79	L ft	19964	17988	14178	$235,285.72	$211,997.57	$167,094.82	$119,385.72	$161,222.85	$146,053.25
Manholes (precast)	$1,235.25	8' deep	75	60	54	$92,643.75	$74,115.00	$66,703.50	$47,008.13	$56,364.00	$58,303.80
Service Connection	$81.00	Connection	415	415	415	$33,615.00	$33,615.00	$33,615.00	$17,056.50	$25,564.00	$29,382.00
			(1/3 per yr. complete)								
		Total				$361,544.47	$319,727.57	$267,413.32	$183,450.34	$243,150.85	$233,739.05
								Total Original Cost			**$660,340.24**
General and Administrative (G&A) Cost		10%									$66,034.02
Engineering Design and Inspections		6%									$39,620.41
								Grand Total Original Cost			**$765,994.68**

5.0 IRRIGATION SYSTEM

Table 3 includes the original cost of the irrigation system not included with the Water Treatment Facilities Original Cost Study or Wastewater Treatment Facilities Original Cost Study conducted in 1993 (Appendices B and C). The irrigation system consists of distribution lines, valves, pumps, pump houses, wells, service lines and meters, etc. Figure IR in Appendix A delineates the locations of the items used to calculate the cost of these facilities in Table 3. While Figure IR indicates numerous pump houses throughout the Resort, only the pump houses serving residents for irrigation water were utilized in the original costs estimate.

Grenelefe Utility System Cost Estimate

ref: 2003 RSMeans "Building Construction Cost Data'
July 15, 2004

Irrigation Line Unit Costs									2003 Prices Orlando 83.4	Lakeland 79.6	Grenelefe 81
PVC Pipe	$/LF	Excavation	$/cy	$/lf	Backfill	$/unit	$/lf	Total $/LF			
.75"								$2.00			$1.62
1"								$3.00			$2.43
1.5"								$5.00			$4.05
2"								$6.00			$4.86
2.5"								$7.00			$5.67
3"								$10.00			$8.10
4"	$8.65	4-6 ft deep	$4.94	$0.75	8" x 12" deep	$0.58	$2.32	$11.72	$9.77	$9.33	$9.49
6"	$13.15	4-6 ft deep	$4.94	$1.10	8" x 12" deep	$0.58	$2.32	$16.57	$13.82	$13.19	$13.42
8"	$21.50	4-6 ft deep	$4.94	$1.65	8" x 12" deep	$0.58	$2.32	$25.47	$21.24	$20.27	$20.62
Valves	$	Excavation	$/cy	$/each	Backfill	$/unit	$/each	Total $/each			
4"	$570.00	4-6 ft deep	$4.94	$4.94	8" x 12" deep	$0.58	$9.28	$584.22	$487.24	$465.04	$473.22
6"	$745.00	4-6 ft deep	$4.94	$4.94	8" x 12" deep	$0.58	$9.28	$759.22	$633.19	$604.34	$614.97
8"	$1,150.00	4-6 ft deep	$4.94	$9.88	8" x 12" deep	$0.58	$9.28	$1,169.16	$975.08	$930.65	$947.02
Service Connection	$100.00	20' avg length						$100.00	$83.40	$79.60	$81.00
Meters	$	Units						Total $/each			
3/4"	$107.00	each						$107.00	$89.24	$85.17	$86.67
1"	$141.00	each						$141.00	$117.59	$112.24	$114.21
1.5"	$420.00	each						$420.00	$350.28	$334.32	$340.20
2"	$530.00	each						$530.00	$442.02	$421.88	$429.30
Wells (Drilled)	$/LF	Units									
12" Dia. Well	$50.00	each						$50.00	$41.70	$39.80	$40.50
6" Dia. Well	$50.00	each						$50.00	$41.70	$39.80	$40.50
Casing	$/LF	Units									
12" Dia. Casing	$42.00	L ft						$42.00	$35.03	$33.43	$34.02
6" Dia. Casing	$19.15	L ft						$19.15	$15.97	$15.24	$15.51
Pumps	$7,200.00	each						$7,200.00	$6,004.80	$5,731.20	$5,832.00

Irrigation Line Costs

	$/Unit	Units	Total Units	# of Units (1/3 per yr. complete) 1978	1983	1989	Construction Costs per Unit (In 2003 Dollars) 1978	1983	1989	Construction Costs per Year (Projected Original Costs) 1978	1983	1989
PVC Pipe										41.1	61.6	70.8
.75"	$1.62	L ft	33675	11225.0	11225.0	11225.0	$18,184.50	$18,184.50	$18,184.50	$9,226.95	$13,829.20	$15,894.60
1"	$2.43	L ft	14000	4666.7	4666.7	4666.7	$11,340.00	$11,340.00	$11,340.00	$5,754.00	$8,624.00	$9,912.00
1.5"	$4.05	L ft	45850	15283.3	15283.3	15283.3	$61,897.50	$61,897.50	$61,897.50	$31,407.25	$47,072.67	$54,103.00
2"	$4.86	L ft	16395	5465.0	5465.0	5465.0	$26,559.90	$26,559.90	$26,559.90	$13,476.69	$20,198.64	$23,215.32
2.5"	$5.67	L ft	20293	6764.3	6764.3	6764.3	$38,353.77	$38,353.77	$38,353.77	$19,460.99	$29,167.81	$33,524.04
3"	$8.10	L ft	5812	1937.3	1937.3	1937.3	$15,692.40	$15,692.40	$15,692.40	$7,962.44	$11,933.97	$13,716.32
4"	$9.49	L ft	44243	14747.7	14747.7	14747.7	$140,002.55	$140,002.55	$140,002.55	$71,038.33	$106,471.07	$122,372.60
6"	$13.42	L ft	17425	5808.3	5808.3	5808.3	$77,957.71	$77,957.71	$77,957.71	$39,556.32	$59,286.36	$68,140.81
8"	$20.63	L ft	398	132.7	132.7	132.7	$2,737.01	$2,737.01	$2,737.01	$1,388.78	$2,081.48	$2,392.35
Valves												
4"	$473.22	each	125	41.7	41.7	41.7	$19,717.43	$19,717.43	$19,717.43	$10,004.77	$14,994.98	$17,234.49
6"	$614.97	each	6	2.0	2.0	2.0	$1,229.94	$1,229.94	$1,229.94	$624.08	$935.36	$1,075.06
8"	$947.02	each	2	0.7	0.7	0.7	$631.35	$631.35	$631.35	$320.35	$480.14	$551.84
Service Connection	$81.00	20' avg length	218	72.7	72.7	72.7	$5,886.00	$5,886.00	$5,886.00	$2,986.60	$4,476.27	$5,144.80
Meters												
3/4"	$86.67	each	1	0.3	0.3	0.3	$28.89	$28.89	$28.89	$14.66	$21.97	$25.25
1"	$114.21	each	98	32.7	32.7	32.7	$3,730.86	$3,730.86	$3,730.86	**$1,893.07**	**$2,837.30**	**$3,261.05**
1.5"	$340.20	each	34	11.3	11.3	11.3	$3,855.60	$3,855.60	$3,855.60	$1,956.36	$2,932.16	$3,370.08
2"	$429.30	each	85	28.3	28.3	28.3	$12,163.50	$12,163.50	$12,163.50	$6,171.85	$9,250.27	$10,631.80
Pump Houses												
Abbey Pump House	20'x25' Wood Bldg.		$15/sf						$7,500.00			$6,555.56
12" Dia. Well #7	$40.50	L ft	338	112.7	112.7	112.7	$4,563.00	$4,563.00	$4,563.00	$2,315.30	$3,470.13	$3,988.40
12" Dia. Well #17	$40.50	L ft	400	133.3	133.3	133.3	$5,400.00	$5,400.00	$5,400.00	$2,740.00	$4,106.67	$4,720.00
6" Dia. Well #9	$40.50	L ft	588	196.0	196.0	196.0	$7,938.00	$7,938.00	$7,938.00	$4,027.80	$6,036.80	$6,938.40
12" Dia. Casing	$34.02	L ft	137	45.7	45.7	45.7	$1,553.58	$1,553.58	$1,553.58	$788.30	$1,181.49	$1,357.94
12" Dia. Casing	$34.02	L ft	140	46.7	46.7	46.7	$1,587.60	$1,587.60	$1,587.60	$805.56	$1,207.36	$1,387.68
6" Dia. Casing	$15.51	L ft	145	48.3	48.3	48.3	$749.72	$749.72	$749.72	$380.41	$570.16	$655.31
Pump #7	$5,832.00	each	1	0.3	0.3	0.3	$1,944.00	$1,944.00	$1,944.00	$986.40	$1,478.40	$1,699.20
Pump #17	$5,832.00	each	1	0.3	0.3	0.3	$1,944.00	$1,944.00	$1,944.00	$986.40	$1,478.40	$1,699.20
Pump #9	$5,832.00	each	1	0.3	0.3	0.3	$1,944.00	$1,944.00	$1,944.00	$986.40	$1,478.40	$1,699.20
Club Estates Pump House	10'x15' Wood Bldg.		$15/sf						$2,250.00			$1,966.67
6" Dia. Well	$40.50	L ft	500	166.7	166.7	166.7	$6,750.00	$6,750.00	$6,750.00	$3,425.00	$5,133.33	$5,900.00
6" Dia. Casing	**$15.51**	**L ft**	120	40.0	40.0	40.0	$620.46	$620.46	$620.46	$314.83	$471.86	$542.33
Pump #7	$5,832.00	each	1	0.3	0.3	0.3	$1,944.00	$1,944.00	$1,944.00	$986.40	$1,478.40	$1,699.20
Canterbury Pump House	15'x20' Wood Bldg.		$15/sf						$4,500.00			$3,933.33
12" Dia. Well #3	$40.50	L ft	545	181.7	181.7	181.7	$7,357.50	$7,357.50	$7,357.50	$3,733.25	$5,595.33	$6,431.00
6" Dia. Well #4	$40.50	L ft	551	183.7	183.7	183.7	$7,438.50	$7,438.50	$7,438.50	$3,774.35	$5,656.93	$6,501.80
12" Dia. Casing	$34.02	L ft	109	36.3	36.3	36.3	$1,236.06	$1,236.06	$1,236.06	$627.19	$940.02	$1,080.41
6" Dia. Casing	$15.51	L ft	120	40.0	40.0	40.0	$620.46	$620.46	$620.46	$314.83	$471.86	$542.33
Pump #3	$5,832.00	each	1	0.3	0.3	0.3	$1,944.00	$1,944.00	$1,944.00	$986.40	$1,478.40	$1,699.20
Pump #4	$5,832.00	each	1	0.3	0.3	0.3	$1,944.00	$1,944.00	$1,944.00	$986.40	$1,478.40	$1,699.20
Cart Shed Pump House												
12" Dia. Well #5	$40.50	L ft	424	141.3	141.3	141.3	$5,724.00	$5,724.00	$5,724.00	$2,904.40	$4,353.07	$5,003.20
12" Dia. Casing #5	$34.02	L ft	120	40.0	40.0	40.0	$1,360.80	$1,360.80	$1,360.80	$690.48	$1,034.88	$1,189.44
Pump #5	$5,832.00	each	1	0.3	0.3	0.3	$1,944.00	$1,944.00	$1,944.00	$986.40	$1,478.40	$1,699.20
	Total						$506,476.57	$506,476.57	$520,726.57	$256,989.96	$385,172.31	$455,153.60
									Total Original Cost			**$1,097,315.87**
General and Administrative (G&A) Cost		10%										$109,731.59
Engineering Design and Inspections		6%										$65,838.95
									Grand Total Original Cost			**$1,272,886.41**

6.0 SUMMARY

The object of this report is to determine the original cost of the potable water distribution system, sewage collection system and irrigation systems not included with the water and wastewater treatment plant facilities including force mains and lift stations not included in the 1993 original cost studies (Appendices B and C). A summary of these costs is as follows:

Potable Water Distribution System	$1,147,314.23
Domestic Wastewater Collection System	$765,994.68
Irrigation Systems	$1,272,886.41
Total additional original cost	**$3,186,195.32**

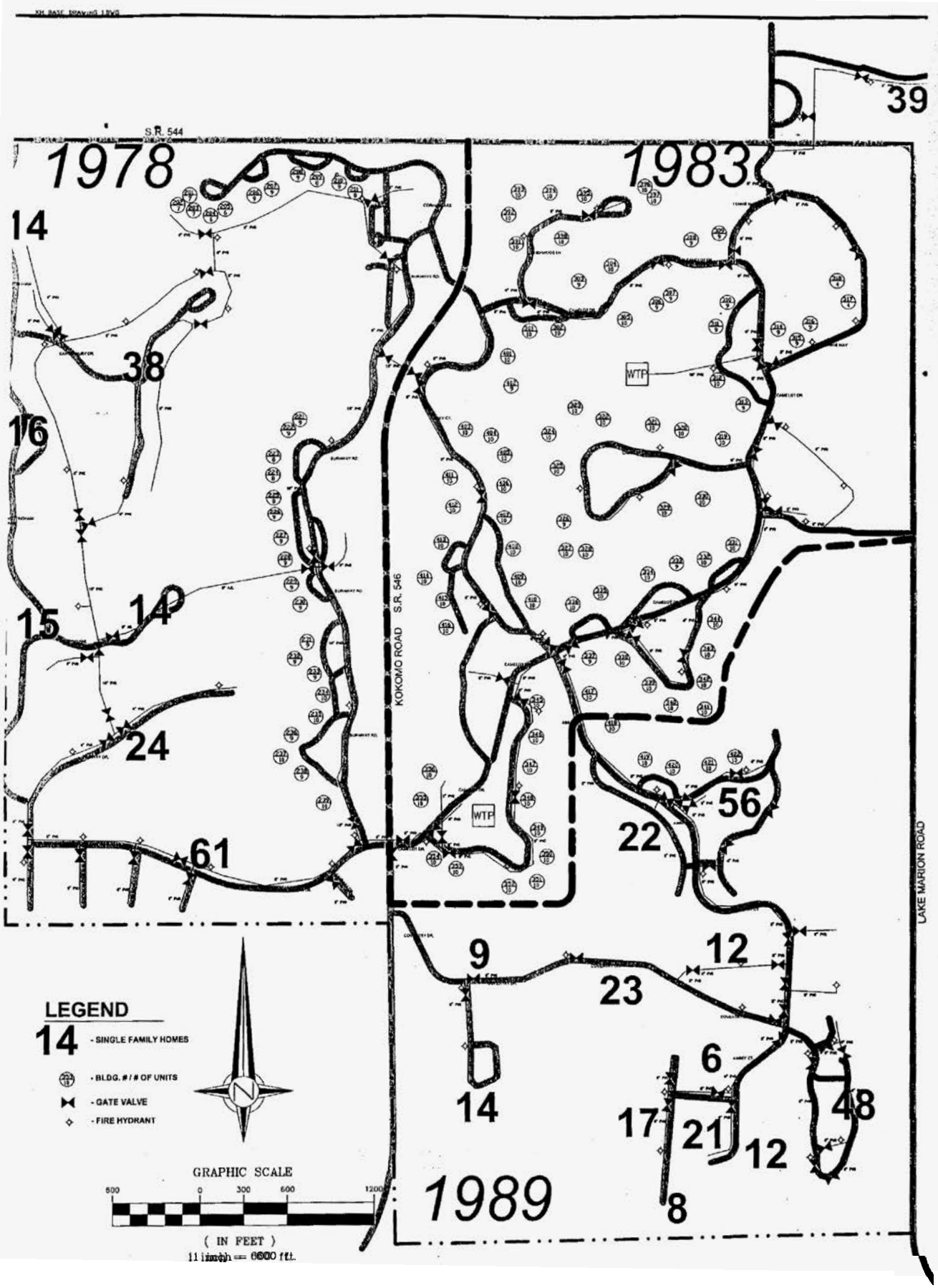
The original cost of the water and wastewater treatment facilities as calculated in 1993 and attached in Appendices C and D are as follows:

Water Treatment Plant	$97,884.00
WWTP/Effluent Disposal and Force Mains/Lift Stations	$2,150,000.00
Total Treatment Facilities original cost	**$3,147,884.00**
Grand total utility original cost	**$6,334,079.32**

Please be advised that errors found in these 1993 reports have been hand corrected and certified in the Appendix.

The above original costs are directly associated with the consumer needs for this community.

Appendix A



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	1"=600'	Scale
	6/13/04	Date
of	04112	File

POTABLE WATER PLAN

GRENELEFE RESORT AND COUNTRY CLUB

RUDY ARCEO, PROJECT MANAGER, GRENELEFE UTILITIES

S.E.A.

SHEFFIELD ENGINEERING & ASSOCIATES

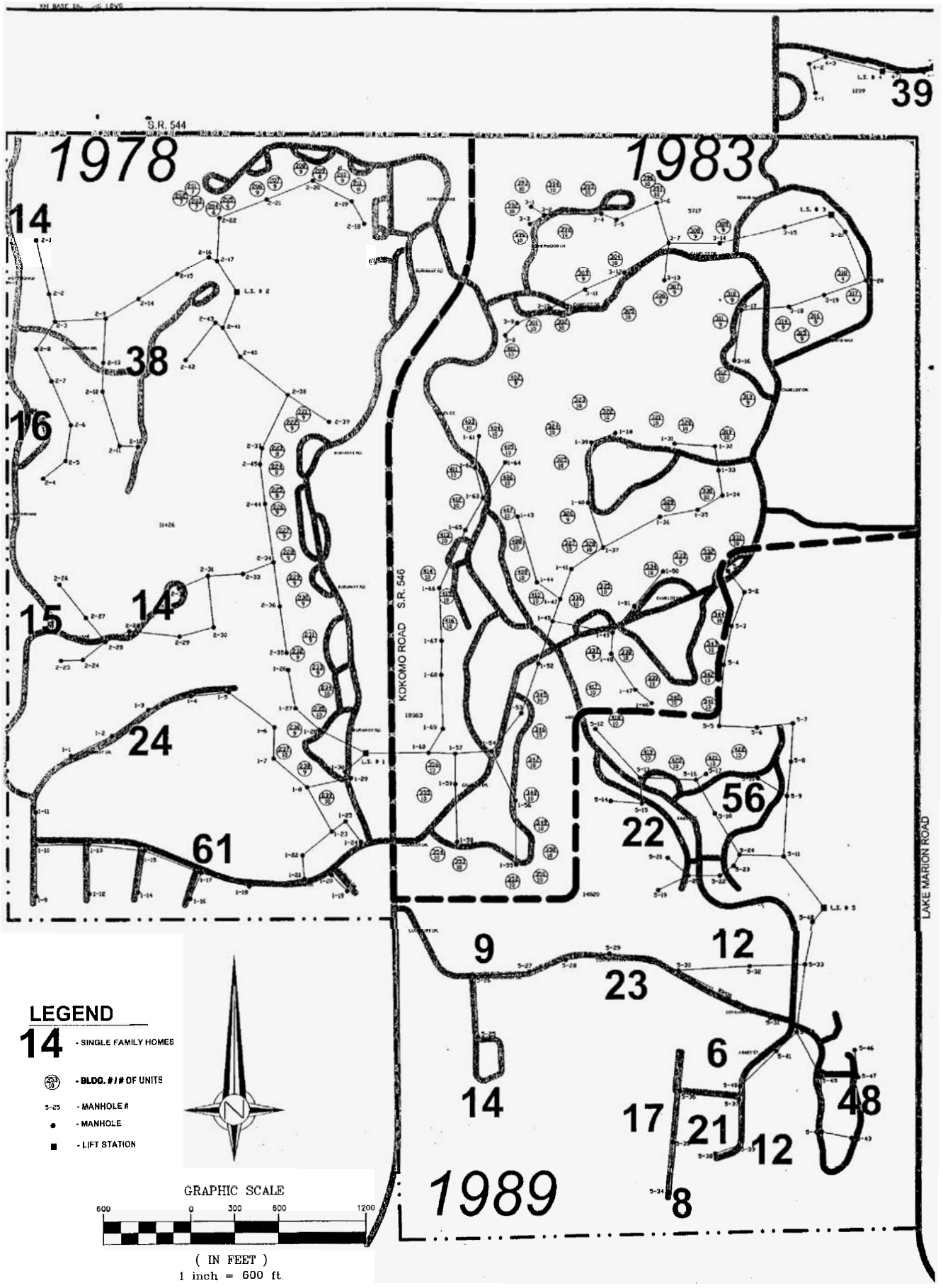
4322 ANDERSON ROAD, ORLANDO, FL 32812

M. P. BAHOR, P.E. • PRESIDENT, PH. 407-658-0512

CIVIL AND ENVIRONMENTAL ENGINEERING SERVICES

No.	Description

Appendix B



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of	04112	File

SANITARY SEWER PLAN

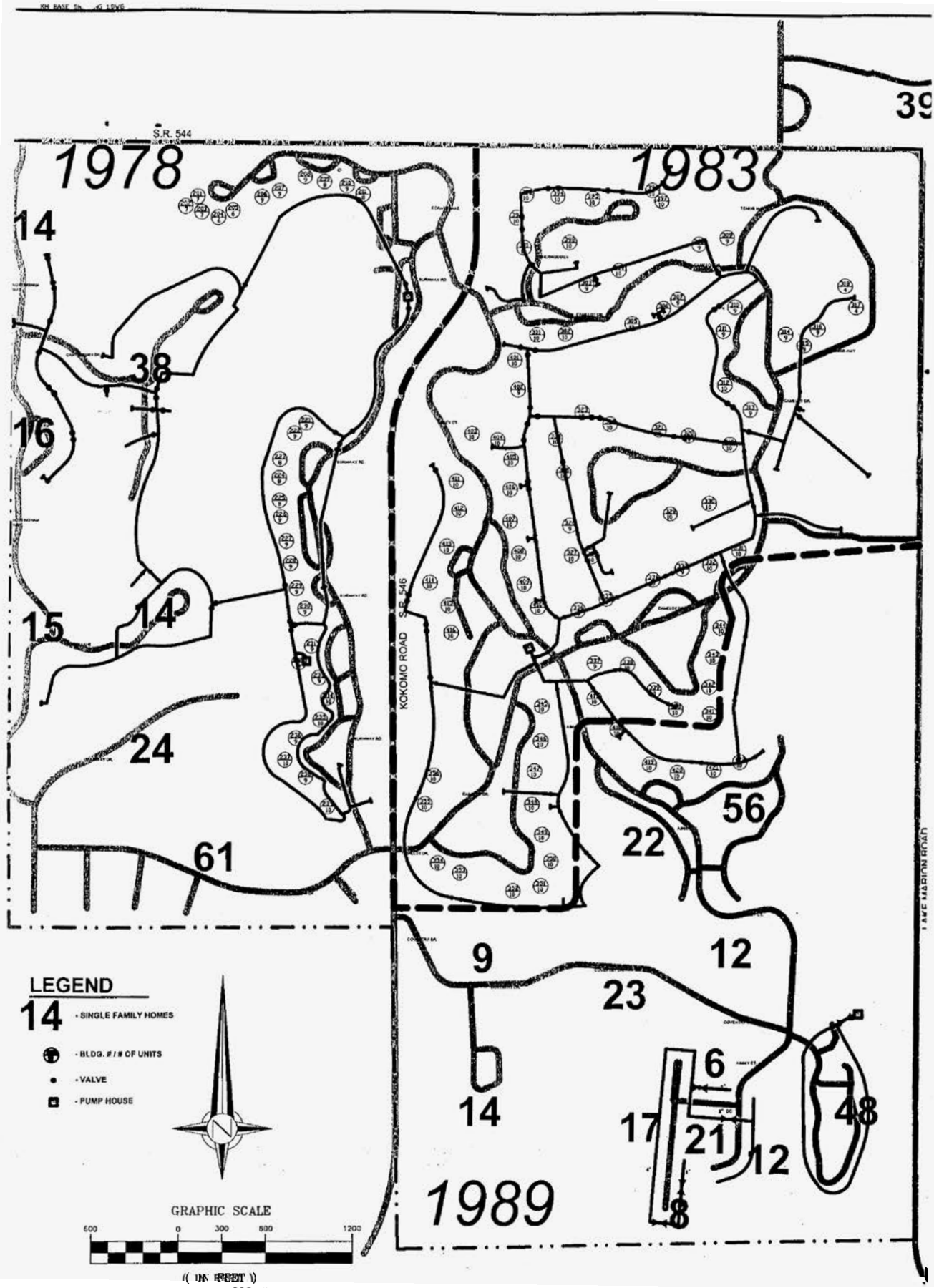
GRENELEFE RESORT AND COUNTRY CLUB

RUDY ARCED, PROJECT MANAGER, GRENELEFE UTILITIES

SHEFFIELD ENGINEERING & ASSOCIATES
4322 ANDERSON ROAD, ORLANDO, FL 32812
S.E.A.
M. P. BAHOR, P.E. - PRESIDENT, PH. 407-658-0512
CIVIL AND ENVIRONMENTAL ENGINEERING SERVICES

Revisions		
#	Date	Description

Appendix C



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	94112	File	

IRRIGATION PLAN

GRENELEFE RESORT AND COUNTRY CLUB

RUDY ARCEO, PROJECT MANAGER, GRENELEFE UTILITIES

S.E.A.

SHEFFIELD ENGINEERING & ASSOCIATES

4322 ANDERSON ROAD, ORLANDO, FL 32812

M. P. BAHOR, P.E. - PRESIDENT, PH. 407-658-0512

CIVIL AND ENVIRONMENTAL ENGINEERING SERVICES

Revisions		
#	Date	Description

ORIGINAL COST STUDY

OF

WATER TREATMENT FACILITIES

AT

GRENELEFE RESORT & CONFERENCE CENTER

POLK COUNTY, FLORIDA

10/6/04

FOR

GRENELEFE UTILITIES

BY

SHEFFIELD ENGINEERING
4322 ANDERSON RD. • ORLANDO, FL. • 32812

C. W. SHEFFIELD, P.E
President
(407) 658-0512

Mike Sheffield

DECEMBER 1993

ORIGINAL COST STUDY

WATER TREATMENT FACILITIES

FOR

GRENELEFE UTILITIES

POLK COUNTY, FLORIDA

ORIGINAL COST STUDY

WATER TREATMENT FACILITIES

FOR

GRENELEFE UTILITIES

POLK COUNTY, FLORIDA

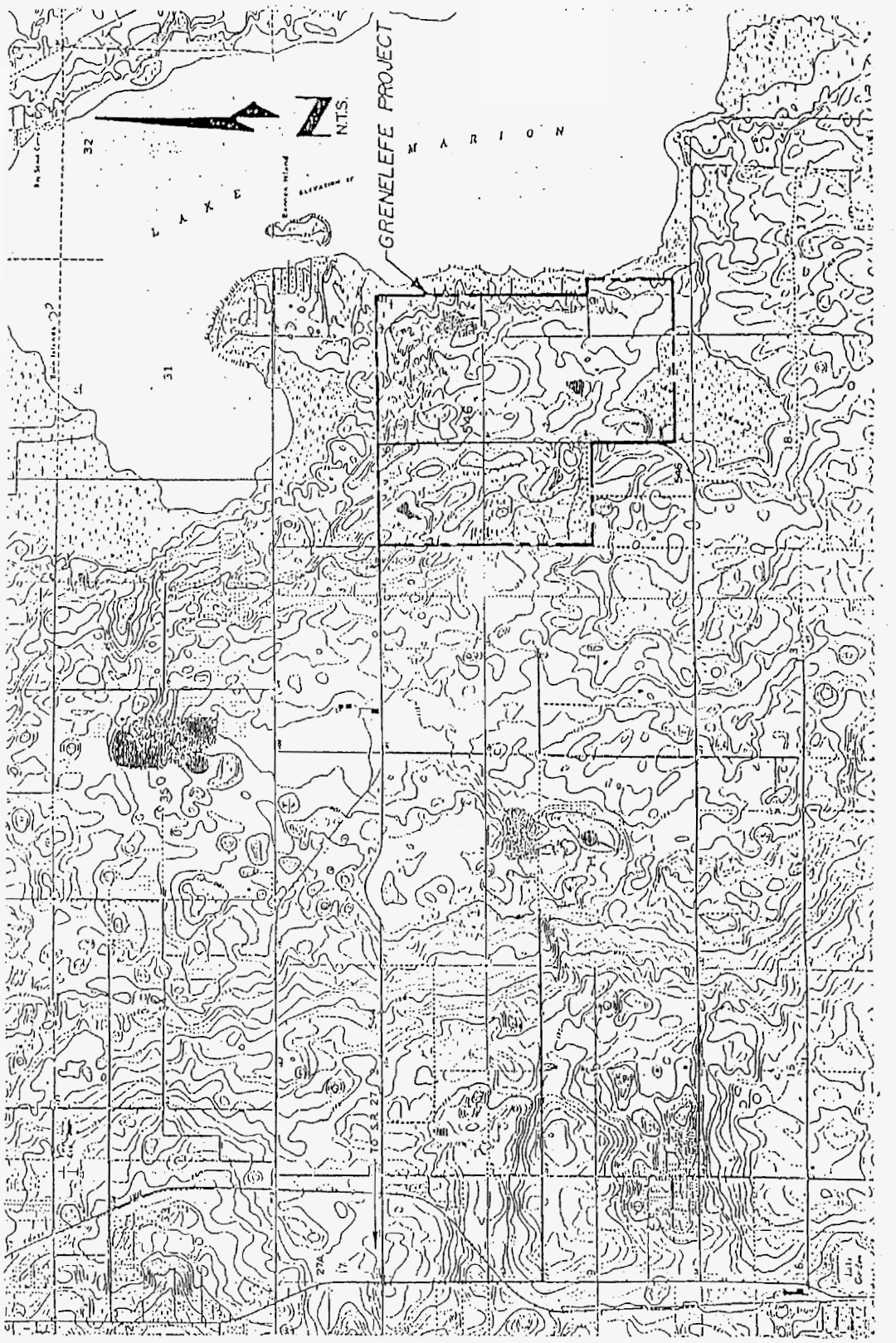
GENERAL

This report covers a detailed study made to determine the original and 1993 replacement costs of all water facilities owned by Grenelefe Utilities and serving Grenelefe Resort & Conference Center within Polk County, Florida as shown in Figures 1 and 2.

It is the purpose of this report to estimate the approximate 1993 replacement and the original cost of the facilities as of the dates noted on the enclosed Detail Sheets. This study will determine the accrued depreciation based on those dates so as to establish the existing cost of all water facilities used and useful.

METHOD

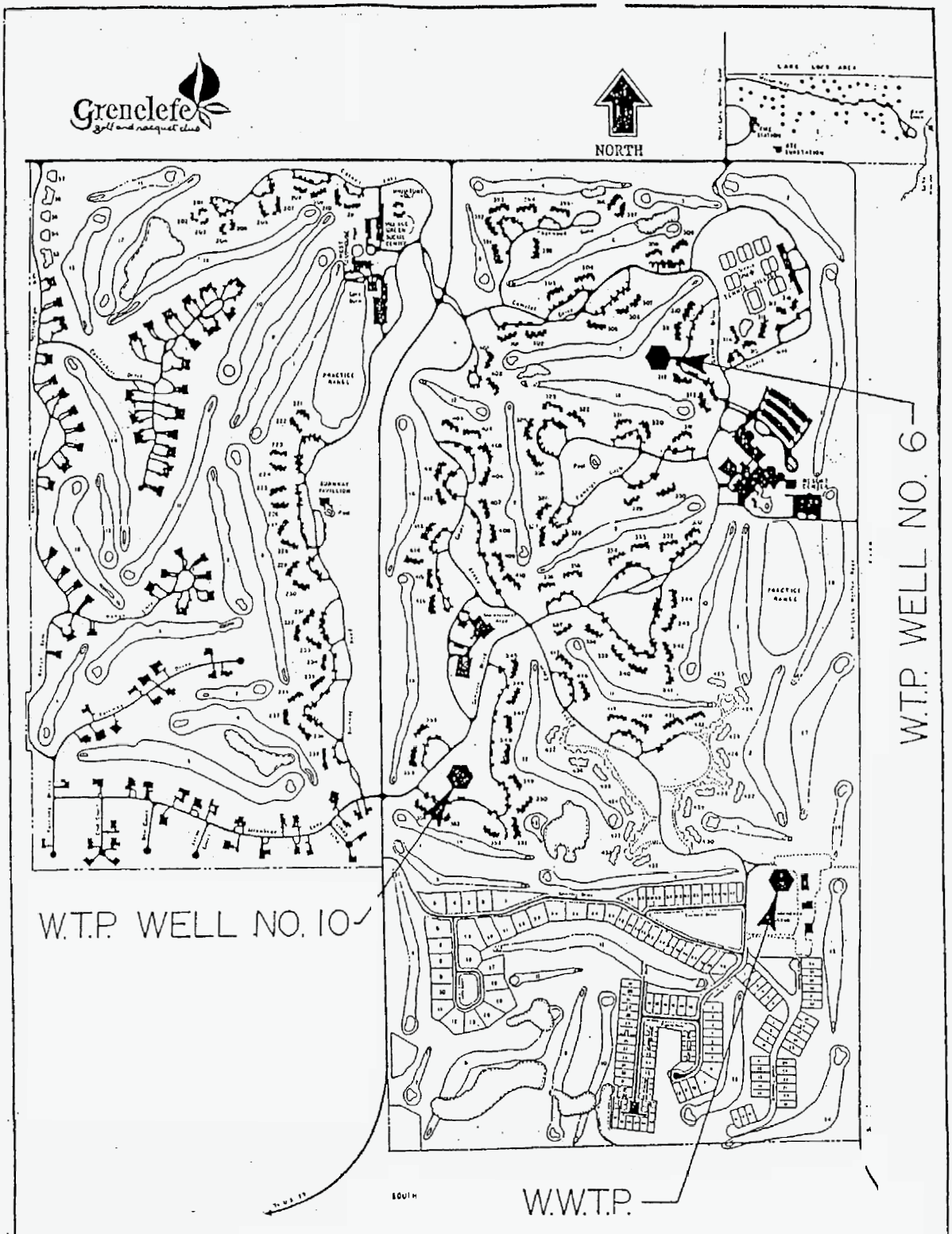
All water facilities owned by Grenelefe Utilities (known hereafter as "the Company") and used to provide water treatment to its customers is listed in accordance with the Uniform System of Accounts for Water Utilities as published by the National Association of Railroad and Utilities Commissioners and in accordance with the System of Accounting as so published by the Florida Public Service Commission. The appropriate year for the Engineering News Record (ENR), Handy Whitman and EPA cost indexes were used to calculate these costs. Copies of same are enclosed in the Appendix of this report. Detailed Material Lists for well and water treatment plants Number 6 and Number 10 are in the Appendix.



PROJECT LOCATION MAP
N.T.S.

FIGURE 1

SHEFFIELD ENGINEERING
4332 ANDERSON RD. • ORLANDO, FL. • 32812



WATER AND WASTEWATER TREATMENT PLANT LOCATION MAP
N.T.S.

FIGURE 2

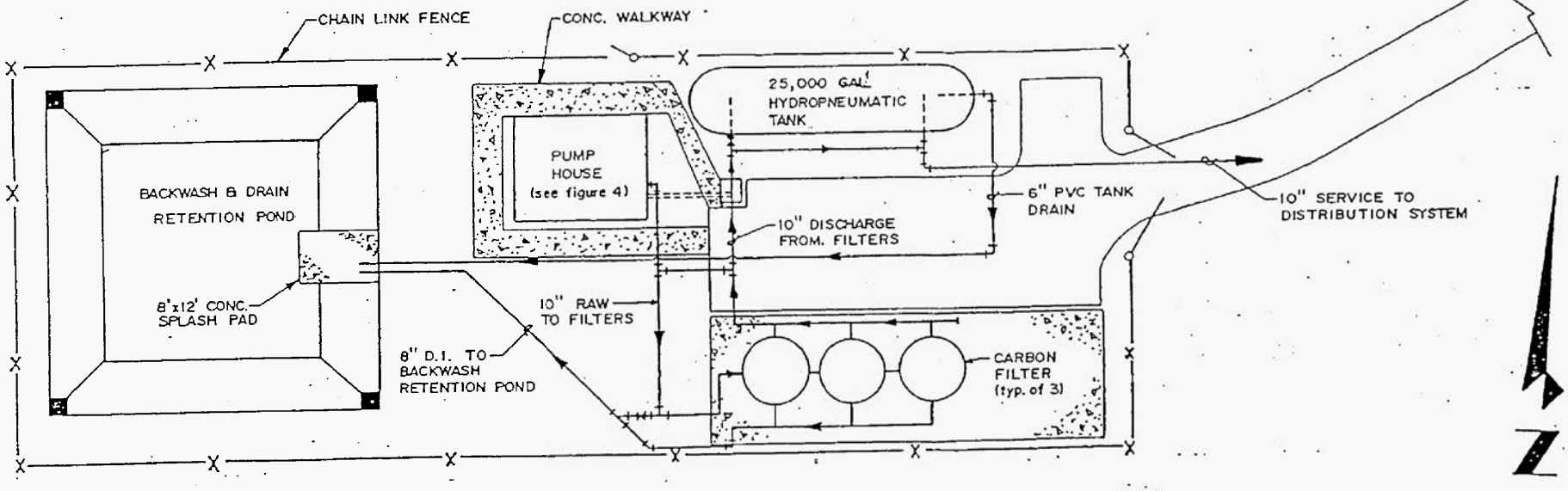
SHEFFIELD ENGINEERING
4322 ANDERSON RD. • ORLANDO, FL. • 32812

The information contained herein was obtained by analysis of the Company's accounting records, plant files, research of available "as built" construction drawings to determine quantities and dates of installation; discussions with Company personnel; physical inspection of all the water treatment facilities by C.W. Sheffield, P.E. personally; Sheffield Engineering & Associates files and cost determination from utility contractors. Sheffield Engineering personnel made spot checks of the installations to verify sizes and types of tanks, buildings, filters and piping. Based on the results of these investigations, plans have been prepared to show the various water treatment systems, along with detailed descriptions of the properties involved. The plans (Figures 3, 4, and 5) and detail sheets (Tables 1-6) are to be considered as attached hereto, and forming part of, this report.

It must be noted that in some instances it was impossible to determine the age of the specific installation. In these cases an estimate was made by Grenelefe Utilities personnel which reflects a "reasonable" date of installation based on the best information available.

In developing prices, for the estimated and/or calculated original and 1993 replacement costs; contract prices, bids and contractor information on similar projects were taken into consideration. Copy of price information from contractors is enclosed in the Appendix. In some instances, the cost factors were estimated utilizing Sheffield Engineering & Associates' knowledge of similar construction projects costs.

Ten percent general and administrative (G&A) and six percent engineering costs have been added to the estimated total adjusted original and 1993 replacement costs. The G&A costs include company overhead, legal fees, interest during construction, preliminary costs, and miscellaneous items for which the utility company has expended its funds. The engineering cost includes design, inspection and certification.

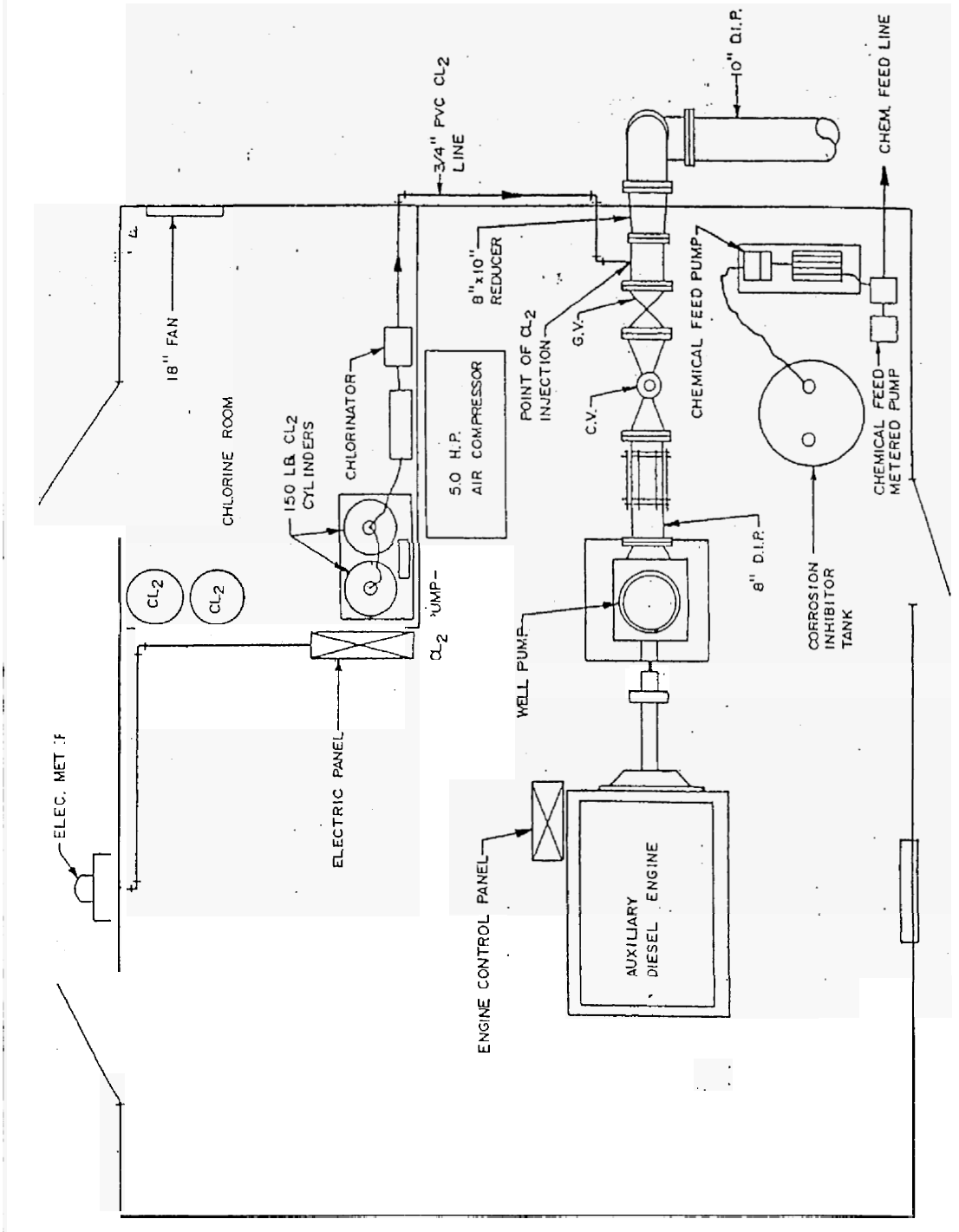


WATER TREATMENT PLANT #6 SITE PLAN

1"=20'-0"

FIGURE 3

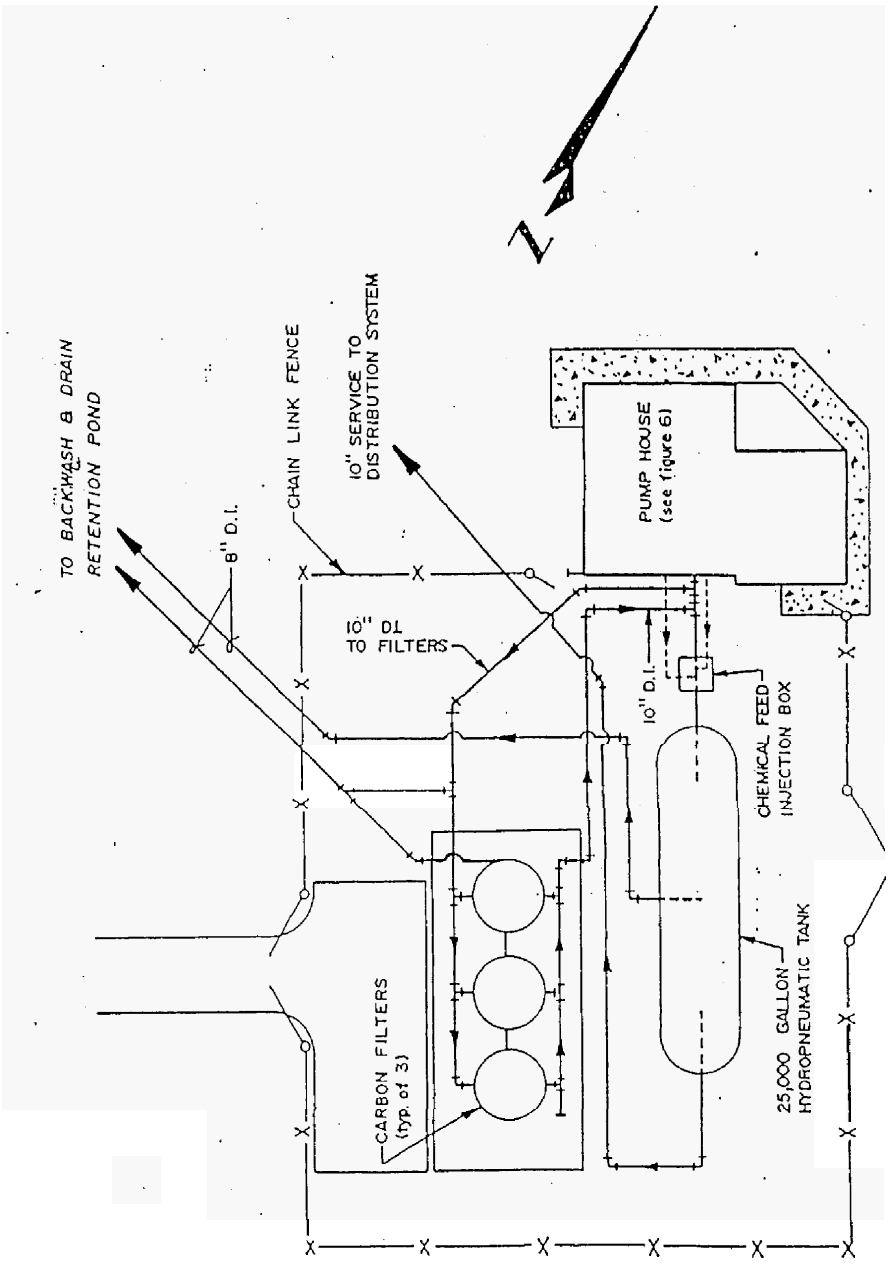
SHEFFIELD ENGINEERING
4232 ANDERSON RD. • ORLANDO, FL. • 32812



W.T.P. #6 PUMP HOUSE DETAIL
3/8"=1'-0"

FIGURE 4

SHEFFIELD ENGINEERING
4332 ANDERSON RD. • ORLANDO, FL • 32812



WATER TREATMENT PLANT #10 SITE PLAN
1"=20'-0"

FIGURE 5

SHEFFIELD ENGINEERING
4222 ANDERSON RD. • ORLANDO, FL. • 32812

WATER TREATMENT PLANT INFORMATION

The water treatment operation at Grenelefe basically consists of two well-pumping water treatment plants that each include pumping, carbon filter (for removal of organics), chlorination, a pressure tank and then into the distribution system. Details of Plant No. 6 are shown in Figures 3 and 4, while Plant No. 10 is shown in Figures 5 and 6. Each plant's cost factors will be discussed separately as follows:

Water Treatment Plant No. 6

1. The Total Adjusted Original Cost (T.A.O.C.) of Plant No. 6 (includes piping up to the plant's property line as provided to Sheffield Engineering) as shown in Table 1 was.....~~$492,800~~ $492,550
2. Table 1 also indicates the total net book value (total adjusted original cost less depreciation)....$310,900
3. Table 2 indicates the total adjusted 1993 replacement cost.....$712,300
4. Table 3 indicates the calculated total adjusted original cost was.....$453,800
5. Table 3 indicates the estimated total adjusted 1993 replacement cost.....$623,000
6. Estimated 1993 total adjusted cost less depreciation in Table 2.....$325,700
7. Table 3 indicates the Net Book Value using calculated total adjusted original cost less depreciation $324,300

It can be seen the actual total adjusted original cost at $492,800 (#1 above) when compared to calculated total adjusted original cost at $453,800 (#4 above) are very comparable. The actual and calculated total adjusted original cost less depreciation were also comparable.

GRENELEFE WATER FACILITIES
NET BOOK VALUE
ORIGINAL COST LESS DEPRECIATION
PLANT NO. 6
TABLE 1

$\Sigma 9 = \$492,550$

Acct No.	Description of Item	1 Avg. Service Life ASL	2 Year Construct.	3 Age Up To 1993	4 Quantity	5 Units	6 Orig. Cost From G.L.U.	7 Eng. Cost @6%xOrg.Cost	8 Adm.& Genl. @10%	9 Total Adjust.Org. Total Cost (6+7+8)	10 Depreciat. Rate %/Yr.	11 Total Depr. Cost (9x10)/3	12 Net Book Value (Org.Cost-Dep.) (9-11)
307	Well #6	27	77	14	1	8" diam.	44,000	2700	4400	51,000	3.703	26,000	25,000
304	Operation Bldg.	25	77	14	1	20x20' Buildup	4,000	200	400	4,600	4.00	2,600	1,800
330	Steel Hydramatic Tank	30	77	14	1	25,000 gal.	32,000	1900	3200	37,000	3.33	17,300	20,000
310	Power Rt. Angle Drive on Well	17	77	14	1		76,000	4600	7600	88,200	5.68	72,600	16,000
311	Well Pump	15	77	14	1	125 HP	8,000	500	800	9,300	6.67	8,700	600
304	Carbon Filter	28	91	2	3	10' diam.	197,000	11,800	19,700	~~270,300~~ 228,500	3.57	16,000	212,200
334	Master Water Meter	17	91	2	1	complete unit	26,000	1600	2600	30,200	5.88	3,600	26,600
320	Chlorinator	7	77	14	dual	complete unit	2,500	200	250	2,900	14.29	5,900	0
304	Yard Piping	35	91	2	200'+	varies	5,000	300	500	5,800	2.86	300	5,500
340	Office Furniture	15	91	2	desks/chairs	-	5,000	300	500	5,800	6.67	800	5,000
340	Computer & Tele-metering	6	91	2	varies	1 cost WTP	1,500*	100	200	1,800	16.67	600	1,200
341	Transportation	6	84	9	1/2	Chev. truck	5,000*	300	500	5,800	16.67	8,700	0
	Land	0	Purch. 1977	--	0.25 acre	$10,000/A	2,500*	200	300	3,000	--	0	3,000
343	Tools	15	91	2		varies	500*	50	50	550	6.67	50	500
344	Lab Equipment	10	91	2		varies	500*	50	52	550	10.00	50	500
346	Communication Equip.	10	91	2	1/2	port.base unit	1500*	100	150	1800	10.00	400	1,400
347	Misc. Equipment	10	91	2		varies	1500*	100	150	1800	10.00	400	1,400
304	Fence	28	91	2	160'	7' high stockade	1100*	50	100	1250	3.6	100	1,150
304	Fence	28	91	2	285'	7' high chain link	3700*	200	400	4300	3.6	300	4,000
304	Gate	28	91	2	2	10'	200*	20	30	250	3.6	50	200
304	Backwash Pond	28	91	2	1	50'x50'x4'deep	3300*	200	300	3800	3.6	300	3,500
304	Asphalt Rd.	28	91	2	200'	10' wide 8" asphalt	2700*	200	300	3200	3.6	200	3,000
347	Chemical Feeder	10		2	1	Pulstron	1000*	50	100	1150	10.0		

Acct No.	Description of Item	Avg. Svc. Life ASL	Year Const.	Age to 93	Qty	Units See Table 1	Factor-HWI 1993/ Yr.Constr.	Conversion Factor	Orig. Cost from G.L.U.	Orig. Cost X 6% Eng.	Orig. Cost X 10% Admin.	Total Adjusted Cost	Total Adj.Cost X Conv.Factor 1993 Replace Cost
307	Well #6	27	77	14	1	8"	369/177	2.08	44000	2700	4400	51000	106,500
304	Oper. Building	25	77	14	1	20x20'	243/136	1.79	4000	200	400	4600	8,200
330	Steel Hydromatic Tank (25,000 gal)	30	77	14	1		314/158		32000	1900	3200	37000	72,500
310	Power RtAngle Driveon Well & Motor Diesel	17	77	14	1		369/177						
311	Well Pump (elec)	15	77	14	1		369/177	2.08	8000	500	800	9300	19,300
		28	91	2	1		314/303	1.04	197000	11800	19700	228500	237,600
334	Master Water Meter	17	91	2	1		207/156						
								2.08	2500	200	250	2900	5,000
304	Yard Piping	35	91	2	Varies		166/191	0.87	5000	300	500	5800	5,000
340	Computer & Telemetry	6	91	2	Varies		314/303	1.04	1900	100	100	1000	1,000
341	Transportation	6	84	9	1 Chev Truck		314/261	1.20	5000*	300	500	5800	7,000
	Land	0	--	--	25Ac	$10,000/Ac	--	--	2500	200	300	3000	3,000
343	Tools	15	91	2	Varies		314/261	1.20	500*	50	50	600	700
344	Lab Equipment	10	91	2	Varies		314/261	1.20	500*	50	50	600	700
346	Communication Equipment	10	91	2	Varies		314/261	1.20	1500*	100	150	1800	2,200
347	Misc. Equipment	10	91	2	Varies		314/261	1.20	1500*	100	150	1800	2,200
304	Fence	28	91	2	160'	7' stock wire	314/261	1.20	1100*	50	100	1250	1,500
304	Fence	28	91		285'	7' hi-3str barb wire	314/261	1.2	3700*	200	400	4300	5,200
304	2 - 10' Swing Gate	28	91		1	2-10' swing	314/261	1.2	200*	20	30	250	300
304	50'x50' Backwash Pond	28	91		1	50'x50' x4' deep	314/261	1.2	3300*	200	300	3800	4,600
304	Asphalt Rd.	28	91		200'	10' wide	314/261	1.2	2700*	200	300	2200	2,600
347	Chemical Feeder	10	91		1	Pulstron	314/261	1.2	1000*	50	100	1150	1,400
									424,500	25,720	42,580	492,800	712,300

* Eng. Estimate

GRENFELL WATER FACILITIES
ESTIMATED & CALCULATED ORIGINAL COST
PLANT NO. 6

TABLE 3

Description of Item	1 Avg. Svc. Life	2 Year Construct.	3 Age Up To 1993	4 Quantity	5 Units	6 Estimated 1993 Replac. Cost	7 Factor-HWI Yr.Cons/1993	8 Conversion Factor	9 Original Cost (6x8)	10 Eng. Est. @6%Orig.Cost (9)x6%	11 Adm.-Genl @10%Orig.Cost (9)x10%	12 TotalAdj. Orig.Cost (9+10+11)	13 Deprec. Rate %	14 Total Depreciat. (12x13x3)	15 Net Book Value Orig.Cost-Dep. (12-14)	16 Total Depreciation Since 1993 Replace.Cost (6x13x3)	17 Net Book Value 1993 Cost -Deprec. (6-16)
Well #6	27	77	14	1	Total system	80,000*	177/369	.48	38,400	2300	3800	44,500	3.7	23,000	21,500	41,000	39,000
Oper. Bldg	25	77	14	1	20' x 20'	16,000*	166/243	.68	10,900	700	1100	12,700	40	9,100	3,600	9,000	7,000
Steel Hydromatic Tank	30	77	14	1	25,000 gal	75,000*	158/314	.50	37,500	2300	3800	43,600	3.3	20,300	23,300	35,000	40,000
Power Rt Angle. Drive on Well & Diesel Eng	37	77	14	1	complete unit	50,000	177/369	.48	24,000	1400	2400	27,800	5.88	22,900	4,900	41,200	8,800
Well Pump (Elec)	15	77	14	1	125HP complete	30,000	177/369	.48	14,400	900	1400	16,700	6.67	15,600	1,100	28,000	2,000
Carbon Filter,piping and slab	28	91	2	3	10'dia.filters	210,000	303/314	.96	201,600	12,100	20,200	233,900	3.57	16,700	217,200	15,000	195,000
Master water meter	17	51	2	1	complete unit	5,000*	156/207	.75	3,800	200	400	4,400	5.88	500	3,900	600	4,400
Chlorinator	7	77	14	1		2,000*	158/314	.50	1,000	100	100	1,200	14.29	2,400	0	4,000	0
Yard Piping & valves	35	51	2	200'	varies	4,000*	166/191	.50	2,000	100	200	2,300	2.86	100	2,200	200	3,800
Ofc. Furniture	15	83	10 +			1,500*	303/314	.87	1,300	100	100	1,500	6.67	1,000	500	1,000	500
Computer & Telemetering	6	91	2	1	1 cost cost each RTP	20,000*	303/314	.98	19,600	1200	2000	22,800	16.67	7,600	15,200	6,700	13,300
Transportation	6	84	9	1 1984 Chev truck	1 cost	10,000	261/314	.83	8,300	500	600	9,600	16.67	14,400	0	15,000	0
Land	0	-	-	.25 acres	$10,000/A	2,500	-	--	2,500	200	300	3,000	0	0	3,000	0	3,000
Tools	15	91	2	1	varies	700*	261/314	.83	600	50	50	700	6.67	100	600	100	600
Lab equipment	10	91	2	1	varies	700*	261/314	.83	600	50	50	700	10.0	100	600	100	600
Communication equip.	10	91*	2	1/2	port.base unit	10,000*	261/314	.83	8,300	500	800	9,600	10.0	1,900	7,700	2,000	8,000
Misc. equipment	10	91*	2	--	varies	2,000*	261/314	.83	1,700	100	200	2,000	10.0	400	1,600	400	1,600
Fence	28	91	2	160'	7' high stock	1,600*	261/243	.83	1,300	100	100	1,500	3.6	100	1,400	100	1,500
Fence	28	91	2	285'	4' high chain link with 3 strand barbed wire	4,500*	261/243	.83	3,700	200	400	4,300	3.6	300	4,000	300	4,200
Gate	28	21	2	2	10'	200*	261/243	.83	150	25	25	200	3.6	15	200	15	200
Ret. pond-Backwash	28	91	2	1	50'x50'x4 deep	7,800*	261/243	.83	6,500	400	600	7,500	3.6	500	7,000	600	7,200
Asphalt Rd.	28	91	2	200	10' wide,1½ top sub-base	2,400*	261/243	.83	2,000	100	200	2,300	3.6	300	2,000	200	2,200
Chemical feeder	10	91	2	1	Pulstron	1,000*	261/314	.83	800	100	100	1,000	10.0	200	800	200	800
						537,000			390,950	23,725	39,125	453,600		135,615	324,300	191,715	325,700

Estimated total adjusted 1993 replacement cost: $537,000 + 6% + 10% = $623,000

*Eng. estimate

Water Treatment Plant No. 10

1. The Total Adjusted Original Cost (T.A.O.C.) as provided to Sheffield Engineering by Grenelefe Utilities as shown in Table 4 was.....~~$505,300~~ $505,334
2. Total Net Book Value (T.A.O.C. less depreciation) as shown on Table 4.....$385,400
3. Calculated total adjusted 1993 replacement cost as shown in Table 5.....$601,800
4. Calculated T.A.O.C. as shown in Table 6.....$545,800
5. Estimated total adjusted 1993 replacement cost as shown in Table 6.....$641,000
6. Estimated total adjusted 1993 replacement cost less depreciation - Table 6.....$376,000
7. Net Book Value using calculated T.A.O.C. less depreciation as shown in Table 6.....$403,400

The actual total adjusted original cost was ~~$505,300~~ $505,334 while the calculated total adjusted original cost was $545,800. The estimated 1993 total adjusted cost was $641,000 and the calculated total adjusted 1993 cost was $601,800. These values could be considered comparable at approximately a 9% difference.

GRENELEFE WATER FACILITIES
NET BOOK VALUE
ORIGINAL COST LESS DEPRECIATION
PLANT NO. 10

Acct No.	Description of Item	Avg. Svc. Life ASL	Year Const.	Age to 93	Qty	Units	Original Cost From Grenelefe Util	Eng., Cost @ 6% of Orig. Cost	Admin. & Gen. @ 10%	Total Orig. Adjust. Cost	Deprec. Rate %/yr.	Total Dep. Cost	Net BookValue (Orig. Cost - Dep.)
307	Well #10 (12" diameter)	27	83	10	1	Total system	$99,360	5,962	9,936	115,258	3.703%	42,680	$72,600
304	Oper. Building (25'x35')	25	83	10	1	wood	4,000	240	400	4,640	4.00	1,856	2,800
330	Steel Hydromatic Tank (25,000 gal)	30	83	10	1	comp.unit	32,000	1,920	3,200	37,120	3.33	12,370	24,750
310	Power RtAngle Driveon Well & Diesel Motor	17	83	10	1	comp.unit	16,000	960	1,600	18,560	5.88	10,913	7,600
311	Well Pump	15	83	10	1	125HP	22,600	1,356	2,200	26,156	6.66	17,420	8,736
304	Carbon Filters,piping & slab	28	91	2	3	10'dia.	197,000	11,820	19,700	228,520	3.57	16,312	212,200
334	Master Water Meter	17	91	2		comp.unit	26,000	1,560	2,600				
320	Chlorinator	7	83	10	1	"	2,500	150	250	2,900	14.28	4,141	0
304	Yard piping	35	91	2		varies	5,000*	300	500	5,800	2.86	334	5,500
340	Office Furniture	15	88	5		varies	500*	30	50	580	6.66	193	400
340	Computer & Telemetering	6	91	2	½	unit	4,000*	240	400	4,640	16.67	1,564	3,100
341	Transportation	6	76	17	½	jeep	7,000*	420	700	8,120	16.67	23,011	0
303	Land	0	-	-	.35A	$10,000 /Acre	3,500	200	300	4,000	--	--	4,000
343	Tools	15	91	2	1	varies	2,000*	120	200	2,320	6.67	309	2,000
344	Lab Equipment	10	91	2	1	"	500*	30	50	580	10.0	116	500
~~346~~	~~Communications equipment~~	10	91*	2	Entire cost on WWTP O.V.S.						10.0		0
347	Misc. equipment	10	91*	2	-	varies	500*	30	50	580	10.0	116	500
304	Fence (7'high,3 barb wire)	28	91	2	1	340'	4,400*	300	400	5,100	3.6	400	4,700
347	Chemical feeder	10	91	2	1	Pulstron	800*	50	100	950	10.0	200	750
304	10' Swing Gates	28	91	2	2	-	200*	25	25	250	3.6	25	225
304	Retention pond backwash 50x50x5'	28	91	2	1	500 cu.yds	6,500*	400	700	7,600	3.6	500	7,100
304	Asphalt road to WTP 10'wide. 11"top,8"base	28	91	2	1	120 sq.ft.	1,300*	100	100	1,500	3.6	100	1,400
							~~435,360~~ 435,660	26,210	43,460	~~505,300~~		136,107	385,460

D.R. = ASL / 100

GRENELEFE WATER FACILITIES
NET BOOK VALUE
ORIGINAL COST LESS DEPRECIATION
PLANT NO. 10

TABLE 4

Acct No.	Description of Item	Avg. Svc. Life ASL	Year Const.	Age to 93	Qty	Units	Original Cost From Grenelefe Util.	Eng., Cost @ 6% of Orig. Cost	Admin. & Gen. @ 10%	Total Orig. Adjust. Cost	Deprec. Rate %/yr.	Total Dep. Cost	Net BookValue (Orig. Cost - Dep.)
307	Well #10 (12" diameter)	27	83	10	1	Total system	$99,360	5,962	9,936	115,258	3.703%	42,680	$72,600
304	Oper. Building (25'x35')	25	83	10	1	wood	4,000	240	400	4,640	4.00	1,856	2,800
330	Steel Hydromatic Tank (25,000 gal)	30	63	10	1	comp.unit	32,000	1,920	3,200	37,120	3.33	12,370	24,750
310	Power RtAngle Driveon Well & Diesel Motor	17	83	10	1	comp.unit	16,000	960	1,600	18,560	5.88	10,913	7,600
311	Well Pump	15	83	10	1	125HP	22,600	1,356	2,200	26,156	6.66	17,420	8,736
304	Carbon Filters, piping & slab	28	91	2	3	10' dia.	197,000	11,820	19,700	228,520	3.57	16,312	212,200
334	Master Water Meter	17	91	2		comp.unit	26,000	1,560	2,600	30,160	5.88	3,547	26,600
320	Chlorinator	7	83	10	1	"	2,500	150	250	2,900	14.28	4,141	0
304	Yard piping	35	91	2		varies	5,000*	300	500	5,800	2.86	334	5,500
340	Office Furniture	15	88	5		varies	500*	30	50	580	6.66	193	400
340	Computer & Telemetering	6	91	2	½	unit	4,000*	240	400	4,640	16.67	1,564	3,100
341	Transportation	6	76	17	½	jeep	7,000*	420	700	8,120	16.67	23,011	0
303	Land	0	-	-	.35A	$10,000 /Acre	3,500	200	300	4,000	--	--	4,000
343	Tools	15	91	2	1	varies	2,000*	120	200	2,320	6.67	309	2,000
344	Lab Equipment	10	91	2	1	"	500*	30	50	580	10.0	116	500
~~346~~	~~Communications equipment~~	10	91*	2	Entire cost on WWTP O.V.S.						10.0		0
347	Misc. equipment	10	91*	2	-	varies	500*	30	50	580	10.0	116	500
304	Fence (7'high, 3 barb wire)	28	91	2	1	340'	4,400*	300	400	5,100	3.6	400	4,700
347	Chemical feeder	10	91	2	1	Pulstron	800*	50	100	950	10.0	200	750
304	10' Swing Gates	28	91	2	2	-	200*	25	25	250	3.6	25	225
304	Retention pond backwash 50x50x5'	28	91	2	1	500 cu.yds	6,500*	400	700	7,600	3.6	500	7,100
304	Asphalt road to WTP 10'wide, 1½" top, 8" base	28	91	2	1	120 sq.ft.	1,300*	100	100	1,500	3.6	100	1,400
							~~435,360~~ 435,660	26,210	43,460	~~505,300~~ 505,334		136,107	385,460

D.R. = ASL / 100

1993 REPLACEMENT COST
PLANT NO. 10
TABLE 5

Acct No.	Description of Item	Avg. Svc. Life ASL	Year Const.	Age to 93	Qty	Units	Factor-ENR 1993/ Yr.Constr.	Conversion Factor	Orig. Cost from G.L.U.	Orig. Cost X 6% Engr.	Orig. Cost X 10% Admin.	Total Adjusted 1993 Cost	Total Adj. Cost X Conv. Factor 1993 Replace. Cost
307	Well #10 (12" diameter)	27	83	10	1	Total system	369/270	1.367	$99,360	5960	9936	115,258	157,000
304	Oper. Building (25'x35')	25	83	10	1	wood	243/200	1.215	4,000	240	400	4,640	5,600
330	Steel Hydromatic Tank (25,000 gal)	30	83	10	1	comp.unit	314/257	1.2718	32,000	1920	3200	37,120	45,350
310	Power RtAngle Driveon Well & Diesel Motor	17	83	10	1	comp.unit	369/270	1.367	16,000	960	1600	18,560	25,400
311	Well Pump	15	83	10	1	125HP	369/270	1.367	22,600	1360	2200	26,160	35,800
304	Carbon Filters	28	91	2	3	10'dia.	314/303	1.036	197,000	11820	19,700	228,520	236,800
334	Master Water Meter	17	91	2	1	comp.unit	207/156	1.327	26,000	1560	2600	30,160	40,000
320	Chlorinator	7	83	10	1	"	314/257	1.222	2,500	150	250	2,900	3,600
304	Yard piping	35	91	2		varies	314/303	1.036	5,000*	300	500	5,800	6,000
340	Office Furniture	15	88	5+		varies	314/284	1.106	500*	30	50	580	600
340	Computer & Telemetering	6	91	2	1	unit	314/303	1.036	4,000*	240	400	4,600	4,800
341	Transportation	6	76	17	1	jeep	314/150	2.093	7,000*	420	700	8,100	17,000
303	Land	0	-	-	.35	@10,000 /Acre	--	--	3,500	200	300	4,000	4,000
343	Tools	15	91	2	1	varies	314/303	1.036	2,000*	120	200	2,300	2,400
344	Lab Equipment	10	91	2	1	"	314/303	1.036	500*	30	50	600	600
346	Communications equipment	10	91*	2				Entire cost on	WWTP O.V.S.			--	--
347	Misc. equipment	10	91*	2	-	varies	314/303	1.036	500*	30	50	600	600
304	Fence (7'high,3 barb wire)	28	91	2	1	340'	243/232	1.05	4,400	300	400	5,100	5,400
347	Chemical feeder	10	91	2	1	Pulstron	314/303	1.036	800	50	100	950	1,000
304	16' Swing Gates	28	91	2	2	-	243/232	1.05	200	25	25	250	275
304	Retention pond backwash 50x50x5'	28	91	2	1	500 cu.yds	243/232	1.05	6,500	400	700	7,600	8,000
304	Asphalt road to WTP 10'wide, 1½"top,8"base	28	91	2	1	120 sq.ft.	243/232	1.05	1,300	100	100	1,500	1,600
									435,660	26,210	43,460	505,300	601,800

GRENELEFE WATER FACILITIES
ESTIMATED & CALCULATED ORIGINAL COST
PLANT NO. 10

TABLE 6

Acct No.	Description of Item	Avg. Svc. life ASL.	Year Const.	Age to 93	Qty	Units	Estimated 1993 Replacement Unit Cost	Factor HWI-Yr. Constr. /1993	Conv Fac-tor	Orig. Cost	Orig. Cost X 6% Chgs.	Orig. Cost X 10% Admin.	Total Adjusted Original Cost	Leprec. Rate %	Total Deprec	Net Book Value (Org.Cost -Dep.)	Total Dep. Using 1993 Repl.Cost	Net Book Value 1993 Cost - Deprec.
307	Well #10 (12" diameter)	27	83	10	1	Total system	$110,000(1)	270/369	.73	$80,300	5000	8000	$93,500	3.7	$34,600	$58,900	$40,700	$69,300
304	Oper. Building (25'x 20)	25	83	10	1	Wood	16,000*	200/243	.82	13,000	800	1300	15,100	4.0	6,000	9,100	6,400	9,600
330	Steel Hydromatic Tank (25,000 gal)	30	83	10	1	Comp.unit	75,000*	257/314	.82	61,500	4000	6100	71,600	3.33	23,800	47,800	45,000	30,000
310	Power RtAngle Driveon Well & Diesel Motor	17	83	10	1	Comp.unit	50,000(1)	270/369	.73	36,500	2200	3600	42,300	5.88	24,900	17,400	29,400	20,600
311	Well Pump	15	83	10	1	125HP	30,000(1)	270/369	.60	18,000	1000	1800	21,900	6.67	13,900	8,000	20,000	10,000
304	Carbon Filters	28	91	2	3	10'dia	210,000(2)	303/369	.96	201,600	12100	20200	233,900	3.57	16,700	217,200	15,000	195,000
334	Master Water Meter	17	91	2		Comp.unit	5,000*	156/207	.75	3,700	200	400	4,200	5.88	500	3,700	600	4,400
320	Chlorinator	7	83	10	1	"	2,000*	257/314	.82	1,600	100	200	1,900	14.29	2,700	0	2,800	0
304	Yard piping	35	91	2		varies	4,000*	303/314	.96	3,800	200	400	4,400	2.86	600	3,800	100	3,700
340	Office Furniture	15	88	5		varies	1,500*	284/314	.90	1,300	100	100	1,500	6.67	500	1,000	500	1,000
340	Computer & Telemetering	6	91	2	1	unit	20,000*	303/314	.96	19,200	1200	1900	22,300	16.67	7,400	14,900	6,700	13,300
341	Transportation	6	76	17	1	Chev. truck	10,000	261/314	.83	8,300	500	800	9,600	16.67	27,200	0	28,400	0
303	Land	0	-	-	.35	$10,000 /acre	3,500(2)	-	-	3,500	200	400	4,100	-	0	4,100	-	4,100
343	Tools	15	91	2	1	varies	700*	303/314	.96	700	0	100	800	6.67	100	700	100	600
344	Lab Equipment	10	91	2	1	"	700*	303/314	.96	700	0	100	800	10.00	200	600	100	500
346	Communications equipment	10	91*	2			Entire cost on WWTP O.V.S.											
347	Misc. equipment	10	91*	2	-	varies	2,000*	303/314	.96	1,900	100	200	2,200	10.00	400	1,800	400	1,600
304	Fence (340' 7'high,3 barb wire)	28	91	2	1	340'	5,000*	232/243	.95	5,000	300	500	5,800	3.60	400	5,400	400	4,700
347	Chemical feeder	10	91	2	1	Pulstrc	1,000*	303/314	.96	1,000	100	1000	1,200	10.00	200	1,000	200	800
304	10' Swing Gate	28	91	2	2	-	200*	232/243	.95	200	-	100	300	3.60	100	200	100	100
304	Retention pond backwash Bin&Comp	28	91	2	1	500 cu.yds.	6,500*	232/243	.95	6,200	400	600	7,200	3.60	500	6,700	500	6,000
304	Asphalt road to WTP 10'wide, 1½"top,6"base	28	91	2	1	120 sq.ft.	1,400*	232/243	.95	1,000	100	100	1,200	3.60	100	1,100	100	1,300
							552,600			469,000			545,800			403,400		376,000

*Sheffield Engrg. estimate
(1) Estimate from Meridity Well Drilling
(2) From Grenelefe Utilities

Estimated Total Adjusted 1993 Replacement Cost: $552,600 + 6% + 10% = $641,000

DEPRECIATION

The accrued depreciation has been taken based on the following estimated life of the various types of property:

Water pipes, fittings and valves 4 inches and larger	67 years
Water pipes, fittings and valves Less than 4 inches	50 years
Supply wells	50 years
Structures	50 years
Mechanical equipment	20 years
Electrical wiring and equipment	20 years
Water meters	20 years

Please realize these depreciation rates do not coincide with those values used by Grenelefe Utilities for depreciation on a yearly basis. The above values do reflect those used in determination of original and replacement value costs in this report.

CONCLUSIONS AND SUMMARY

The object of this cost study report was to obtain the total adjusted original and 1993 replacement costs of the two water treatment plants (Nos. 6 and 10) and all real property of these two water treatment plants owned by Grenelefe Utilities at Grenelefe Resort & Conference Center. These water treatment systems are generally located in middle Polk County, Florida at the Grenelefe Resort and Conference Center as shown in Figure 1.

Your attention is respectfully directed to the enclosed detail sheets, Tables 1-6, for explanation and calculation of how an original and 1993 replacement costs were reached on each item at both plants. These sheets give a detailed breakdown of the estimated original cost, depreciation and depreciated of the original cost. The enclosed Figures (3-6) depict the two water treatment plants and systems' physical features.

The findings of this study indicated the Total Adjusted Original Cost for Water Plant No. 6 was ~~$492,800~~ $492,550 with a Net Book Value (Total Adjusted Original Cost Less Depreciation) was $310,900. The total adjusted 1993 replacement cost was $712,300.

For Plant No. 10, the Total Adjusted Original Cost was ~~$505,300~~ $505,334. The Net Book Value was $385,400 with a 1993 calculated Total Adjusted Replacement cost of $601,800.

The total cost of Water Treatment Plants 6 and 10 owned by Grenelefe Utilities is: Total Adjusted Original Cost at ~~$998,100~~ $997,884; Net Book Value (Total Adjusted Original Cost - Depreciation) at $696,300 and the Total Adjusted Replacement Cost at $1,314,100.

APPENDIX

GRENELEFE UTILITIES
WATER TREATMENT PLANT

MATERIAL LIST
PLANT #6

1 well; 8" diameter, 680' casing and 904' total depth

1 well pump; 125 hp 750 GPM 125 TDH

Rt angle drive on well pump

60 hp deisel engine

25,000 gallon steel Hydro tank

3 - 10' diameter carbon filter and piping

20' x 60' x 6" filter concrete slab

50' x 50' x 4' deep pond

285' of 6' high chain link fence with 3 strands barb wire

160' of 7' high stockade fence

2 - 10' swing gates

Master meter 10"

200' of 10' wide asphalt road (1 1/2" bituminous 8" sub-base)

30' x 20' wooden oper. building

500'± 10" yard D.I. pipe with 10 gate valve

Chlorinator dual switchover Pulstron

Land: 170' x 62' = .25A

GRENELEFE UTILITIES
WATER TREATMENT PLANT

MATERIAL LIST
PLANT #10

1 well; 12" diameter, 1,440' total depth with 720' of casing

1 well pump 125 hp 750 GPM 125 TDH

Rt angle drive on well pump

60 hp deisel engine

25,000 gallon steel Hydro tank

3 - 10' diameter carbon filter and piping

20' x 46' x 6" filter concrete slab

50' x 50' x 4' deep pond = 10,000 ft^3 x $4/ft. = $40,000

340'- 6' high chain link fence with 3 strands barb wire

2 - 10' Swing gates - $100/gate

Master meter 10"

120' of 10' wide asphalt road (1 1/2" bituminous 8" sub-base) @ $15/ft.

500' of 10" yard D.I. pipe with 10 gate valve @ $50/ft. and $50/valve

20' x 35' wooden oper. building = 700 sq. ft. assume = $50/sq. ft. = $35,000

Land: 85' x 145' and 50' x 50' = .35A

GREENLEFE
COST STUDY
PRICE INFORMATION
JANUARY 1994

1.	Small Building -	$40/sq. ft	Wren Const., Orlando
	Pressure tank -	$ 3/gal.	
2.	Chain link fence 6' -		
	3 strands barbed wire	$15/ft. 1993	Meridith Const. Co.
		$13/ft. 1991	" " "
	Stockyard Fence 7' high	$10/ft. 1993	" " "
		$ 9/ft. 1991	" " "
	Gates - 10' each swing	$100/gate 1993	" " "
		$100/gate 1991	" " "
3.	10' wide asphalt street	$12/ft.	Envirovista Const. Co.
	with 8" sub-base	$11/ft. 1991	Ormond Beach, FL
4.	Pipe		
	10" D.I. yard piping and fittings	$50/ft.	Envirovista Const. Co.
	10" valves	$50/ea.	" " "
	4" PVC sch. 40 or equal inst.	$ 8/ft.	Meridith Const. Co.
	6" " " " " " "	$10/ft.	" " "
	10" " " " " " "	$20/ft.	" " "
5.	E.A. W.W.T.P. and equip.	$4-6/gal.	Meridith & A.B. Curls
6.	50 lb./day dual switch over chlorinator	$2,000	Ellis K. Phillips
	20 gal./day chem. feeder Pulstron installed	$ 750	" " "
7.	Earth work for ponds, no large tree removal	$4-7/yd.	Meridith Const. Co.
		$8-12/yd. 1987)	piping, grassed
		$13/yd. 1991)	and splash pad
8.	Diesel motor with rt. angle drive on well points with auto start-up installed	$5,400	Envirovista
9.	Monitoring wells 25' deep	$2,500/each	Meridith Const. Co.
		$1,000/ea.(1987)	
10.	Tools, lab equipment, office furniture, communication equip. est. by S.E.A. personnel		

11. 1974 EPA index = 217.2/498.7 (1993) = .436
4" PVC = $8/ft. 1993 x .436 = $3.50/ft.
1987 EPA = 406.5/498.7 = .82 x $ 8/ft. = $6.50/ft.
1977 EPA = 278.3/498.7 = .56 x $ 8/ft. = $4.50/ft.
6" PVC F.M. = .82 x $10/ft. = $8.50/ft.
10" PVC F.M. = .82 x $20/ft. = $16.50/ft.

GRENELEFE UTILITIES
COST STUDIES

ENR 20 CITIES
1913 = 100

	Construction Cost	Difference Between Years	Percent Increase Yearly
1989	4606		
		174	3.6%
1990	4780		
		112	2.3%
1991	4892		
		100	2.0%
1992	4992		
		238	4.6%
1993	5230		

Example

1989 - 1990 difference = $\frac{174}{4780}$ = 3.6% increase
1990 ERN Index

GRENELEFE UTILITIES
COST STUDIES

HANDY WHITMAN, EPA & ENR INDEX

	ENR % Increase	EPA WWTP Cost Index Avg.Yr. Index	Well Elec. Pump Equip. (307-311)	Struct. at WTP (304)	Small WTP Equip. (320)	PVC Pipe (331)	Meter (331)
1973		182.6	100	100	100	-	100
1974		217.2	107	104	103	-	100
1975		250.0	136	124	134	100	93
1976		262.7	170	127	150	102	93
1977		278.3	177	136	158	105	100
1978		304.6	187	143	169	109	101
1979		335.0	198	157	185	116	109
1980		365.3	214	174	200	128	114
1981		396.7	233	187	220	133	127
1982		421.6	255	190	239	136	127
1983		420.9	270	200	257	135	128
1984		416.4	273	202	261	139	130
1985		413.3	281	215	272	143	135
1986		403.0	284	214	273	144	135
1987		406.5	285	217	277	138	135
1988		428.4	330	221	284	174	142
1989		441.0	309	227	294	214	135
1990	+3.6%	456.9	340	237	306	204	178
1991	+2.3%	467.4	357	232	303	191	156
1992	+2.0%	476.8	363	230	307	162	164
1993	+4.6%	498.7	369	243	314	166	207

Example of EPA index extension from 1990-93
1989 441.0 x 3.6% = 15.88

441.00
456/88 2 456/9 for year 1990
2

(b) In addition to the penalties and interest otherwise provided, the Commission may impose an additional penalty upon a utility for failure to pay regulatory assessment fees in a timely manner in accordance with s. 367.161, F.S.

(6) Any utility which requests an extension of not more than 30 days and remits, by the due date, an estimated fee payment of at least 90% of the actual fee due shall not be charged interest or penalty on the balance due if paid within the extension period.

(7) Any utility which fails to pay a penalty within 30 days after its assessment by the Commission shall be subject to interest applied to the penalty up to and including the date of payment of the penalty. Such interest shall be compounded monthly, based on the 30-day commercial paper rate for high-grade, unsecured notes sold through dealers by major corporations in multiples of $1,000 as regularly published in the Wall Street Journal.

Specific Authority: 350.127(2), F.S.
Law Implemented: 350.113, F.S.
History: New 5/18/83, formerly 25-10.24, Amended 10/16/86, Transferred from 25-10.024 and Amended 11/9/86, Amended 2/8/90.

25-30.125 System Maps and Records. Each utility shall maintain on file at its principal office located within the State, suitable maps, drawings and/or records of its system and facilities to show size, location, character, date of installation and installed cost of major items of plant and extension of facilities.

Specific Authority: 367.121, F.S.
Law Implemented: 367.121, F.S.
History: Amended 9/12/74, formerly 25-10.27, Transferred from 25-10.027 11/9/86.

25-30.130 Record of Complaints.

(1) Each utility shall maintain a record of each signed, written complaint received by the utility from any of that utility's customers.

(2) The record shall include the name and address of the complainant, the nature of the complaint, the date received, the result of the investigation, the disposition of the complaint and the date of the disposition of the complaint.

Specific Authority: 367.121, F.S.
Law Implemented: 367.121, F.S.
History: Amended 9/12/74, formerly 25-10.30, Transferred from 25-10.030 and Amended 11/9/86.

25-30.135 Tariffs.

(1) Each utility shall adopt and file tariffs in accordance with Chapter 25-9, Florida Administrative Code.

(2) No utility may modify or revise its rules or regulations or its schedules of rates and charges until the utility files and receives approval from the Commission for any such modification or revision.

(3) Each utility shall maintain for customer inspection upon request during regular business hours, a copy of Chapter 25-30, Florida Administrative Code, and a copy of the utility's tariffs, rules, regulations and schedules.

Specific Authority: 367.121, F.S.
Law Implemented: 367.081, F.S.
History: Amended 9/12/74, formerly 25-10.41, Transferred from 25-10.041 and Amended 11/9/86.

25-30.140 Depreciation.

(1) For the purpose of the rule, the following definitions apply:

(a) Account - Water and sewer plant accounts are defined in the NARUC Uniform System of Accounts adopted by Rule 25-30.115.

(b) Amortization - The gradual extinguishment of an amount in an account by distributing such amount over a fixed period.

(c) Asset - Any owned physical object (tangible) or right (intangible) having economic value to its owner.

(d) Average Remaining Life - The future expected service in years of the surviving plant at a given age.

(e) Average Service Life Depreciation Rate - The depreciation rate based on the expected average service to be experienced by the investment or account in question.

$$\text{A.S.L. Rate} = \frac{100\% - \text{Average Net Salvage \%}}{\text{Average Service Life}}$$

(f) Average Service Life - The economic service life that can be reasonably expected from the plant type in question. It is measured by the period of time the subject plant and its associated investment is included on the company's books as in service to the public. The average service life will typically be less than the potential physical life due to factors such as governmental requirements, growth or adverse operating conditions.

(g) Capitalization - Measures of the propriety of capitalization versus expensing as follows:

1. The addition of any retirement unit, or
2. Any replacement with a retirement unit that materially enhances the value, use, life expectancy, strength or capacity of the asset prior to replacement shall be capitalized.
3. The cost of incidental repairs that neither materially add to the value of the property nor appreciably prolong its life and that were made to keep the property in an ordinary efficient operating condition shall be accounted for as a maintenance expense.

(h) Cost of removal - The cost of demolishing, dismantling, tearing down or otherwise removing utility plant, including the cost of transportation and handling incidental thereto.

(i) Depreciation - As applied to depreciable utility plant, the loss in service value not restored by current maintenance incurred in connection with the consumption or prospective retirement of utility plant in the course of service from causes that are known to be in current operation and against which the utility is not protected by insurance. Among the causes to be given consideration are wear and tear, decay, action of the elements, inadequacy, obsolescence, changes in the art, changes in demand and requirements of public authorities. The intent of depreciation per this rule is to provide for recovery of invested capital and to match this recovery as nearly as possible to the useful life of the depreciable investment.

(j) Function - defined as follows:

Water	Sewer
Source of Supply (Accounts 304 to 309)	Collection Plant (Accounts 354 and 360 to 364)
Pumping Plant (Accounts 304,310,311)	Pumping Plant (Accounts 354, 370, 371)
Water Treatment Plant (Accounts 304,320)	Treatment & Disposal Plant (Accounts 354 and 380 to 389)
Transmission & Distribution Plant (Accounts 304 and 330 to 339)	General Plant (Accounts 354 and 390 to 398)
General Plant (Accounts 304 and 340 to 348)	

(k) Mortality Data - See plant activity data.

(l) Net Salvage - The salvage value of property retired less the cost of removal. This is expressed as a percent of retirements in the depreciation rate formula.

(m) Original Cost - As applied to utility plant, the cost of such property to the person first devoting it to public service.

(n) Plant Activity Data - Annual additions, retirements, adjustments or transfers, sales or purchases, and investment balances at end of year.

(o) Property Retired - As applied to utility plant, property that has been removed, sold, abandoned, destroyed or which has been withdrawn from service for any cause.

(p) Remaining Life Depreciation Rate - The depreciation rate based on the average remaining portion of the service life expected to be experienced by the investment or account in question and on the net unrecovered capital for that investment or account.

$$\text{R.L. Rate} = \frac{100\% - \text{Accumulated Reserve \%} - \text{Future Net Salvage \%}}{\text{Average Remaining Life}}$$

The average remaining life for an account or sub-account is a function of known planned retirement or of the average age of that account and its appropriate mortality table.

(q) Replacing or Replacement - The construction or installation of utility plant in place of property retired, together with the removal of the property retired.

(r) Reserve - The accumulated provision for depreciation. The accumulated depreciation reserve is the net of depreciation accruals (expenses) and retired investment as well as any appropriate adjustments or transfers.

(s) Reserve Activity Data - Annual depreciation expense, retirements, transfers or adjustments and end of year balance for the accumulated provision for depreciation.

(t) Retirement Units - Those items of utility plant which, when retired with or without replacement, are accounted for by crediting the book cost to the utility plant account in which it is included.

(u) Salvage Value - The amount received for property retired, less any expenses incurred in connection with the sale or in preparing the property for sale or, if retained, the amount at which the material recoverable is chargeable to materials and supplies or other appropriate account.

(2) The average service life and salvage components for each class of utility are as follows:

(a) Water System Guideline Average Service Lives

Account	Description	Large Utility (Class A & B)	Small Utility (Class C)	Small Utility Function Composite[3]	Net Salvage[4]
1. Source of Supply				28	
304	Structures & Improvements	33[1]	28[1]		
	Frame	28	25		
	Masonry	30	27		
	Reinforced Concrete	40	37		
	Steel (tanks or sheds)	25	22		
	Fiberglass	20	18		
305	Collecting and Impounding Reservoirs	50	40		
306	Lake, River and Other Intakes	40	40		
307	Wells and Springs	30	27		
	Drilled & Cased Well (Floridan or Non-Corrosive)	20	18		
	Shallow Well (Sand Aquifer or Corrosive Water)	40	N/A		
308	Infiltration Galleries and Tunnels	35	32		
309	Supply Mains				

2. Pumping Plant				20
304	Structures and Improvements (see "Source of Supply" for subcategory lives)	33[1]	28[1]	
310	Power Generation	20	17	
311	Pumping Equipment	20	17	
	Electric Pumping Equip.	20	15	
3. Water Treatment Plant				21
304	Structures & Improvements (See "Source of Supply" for sub-category lives)	33[1]	28[1]	
320	Water Treatment Equip.	22[1]	17[1]	
	Chlorination Equip.	10	7	
	Other Mechanical Equip.	25	20	
4. Transmission & Distribution Plant				36
304	Structures & Improvements (See "Source of Supply" for sub-category lives)	33[1]	28[1]	
330	Distribution Reservoirs & Stand Pipes	37[1]	33[1]	
	Steel Pneumatic Tank	35	30	
	Concrete Ground Storage Reservoir	40	37	
331	Transmission & Distribution Mains	40[1]	38[1]	
	Galvanized Steel pipe & Fittings	35	33	
	Black Steel Pipe	20	18	
	Plastic Pipe	45	40	
	Asbestos - Cement	40	35	
	Cast Iron or Ductile Iron	40	35	
	Valves & Valve Boxes	25	20	
	Fire Mains	33	30	
333	Services	40	35	
334	Meters and Meter Installations	20	17	
335	Hydrants	45	40	
339	Other Plant and Miscellaneous Equip.	25	20	
5. General Plant				
304	Structures & Improvements	40[1]	35[1]	
	Reinforced Concrete Bldg.	45	40	
	Masonry Building	40	35	
	Wood Building	35	30	
	Steel Building	40	35	
	Tanks or Sheds	25	20	
340	Office Furniture & Equip.	15	15	
	Computers	6	6	
341	Transportation Equip.	6	6	0
342	Stores Equip.	18	N/A	14 (composite of 342-348)
343	Tools, Shop & Garage Equip.	16	15	
344	Laboratory Equip.	15	N/A	
345	Power Operated Equip.	12	10	
346	Communication Equip.	10	N/A	0
347	Miscellaneous Equip.	15	N/A	
348	Other Tangible Plant	10	10	

(b) Sewer System Guideline Average Services Lives

Salvage Account	Description	Large Utility (Class A & B)	Small Utility (Class C)	Small Utility Composite[3]	Net Function[4]
1. Collection System					
354	Structures & Improvements	32[1]	27[1]	35	
	Above Grade				
	Reinforced concrete	38	35		
	Masonry	30	27		
	Frame	28	25		
	Steel	25	22		
	Below Grade				
	Concrete	35	32		
	Steel	22	20		
	Lift Stations	25	22		
360	Collection Sewers-Force[7]	30[1]	27[1]		
361	Collection Sewers-Gravity[7]	45	40		
	Manholes	30	27		
362	Special Collecting Structures	40	37		
363	Services to Customers[7]	38	35		
364	Flow Measuring Devices	5	5		
365	Flow Measuring Installations	38	35		
2. Pumping Plant					
354	Structures & Improvements	32[1]	27[1]	18	
370	Receiving Wells	30	25		
	Pumping Equip.	N/A	15		
371	Pumping Equip.	18	N/A		
3. Treatment and Disposal Plant					
354	Structures & Improvements (see "Collection System" for Subcategory lives.)	32[1]	27[1]	18	
380	Treatment & Disposal Equip.	18[1]	15[1]		
	Blowers, motors, pumps electric controls	15	12		
	Chlorination Equip.	10	7		
	Other Mechanical Equip.	23	18		
381	Plant Sewers	35	32		
382	Outfall Sewer Lines	30	30		
389	Other Plant and Miscellaneous Equip.	18	15		
4. General Plant					
354	Structures & Improvements	40[1]	35[1]		
	Reinforced Concrete Bldg.	45	40		
	Masonry Building	40	35		
	Wood Building	35	30		
	Steel Building	40	35		
	Tanks or Sheds	25	20		
390	Office Furniture & Equip.	15	15		
	Computers	6	6		
391	Transportation Equip.	6	6	10	
392	Stores Equip.	18	N/A	14 (composite of 392-398)	
393	Tools, Shop & Garage Equip.	16	15		
394	Laboratory Equip.	15	N/A		

395	Power Operated Equip.	12	10	5
396	Communication Equip.	10	N/A	10
397	Miscellaneous Equip.	15	N/A	
398	Other Tangible Plant	10	10	

(c) For the purposes of paragraphs (2)(a) and (b), the following apply:
1. Denotes composite life.
2. Plastic pipe footnote - assumes use of AWWA standard pipe only. Assumes AWWA DR18 used for all mains of 6" or more.
3. To be used only when acceptable company plant balances are not available for developing composites using account lives.
4. Net Salvage zero except as indicated.

(3) Except as listed in Sections (5) and (6) of this rule average service life depreciation rates based on the guideline lives and salvages shall be used in rate proceedings before this Commission.

(4)(a) All Class A and B utilities shall maintain depreciation rates and reserve activity by account as prescribed by this Commission.

(b) All Class C utilities shall maintain depreciation rates and reserve activity data by total depreciable plant, function or account as prescribed by this Commission.

(5)(a) At the time a utility applies for a change in its revenue rates and charges, it may also petition for average service life depreciation rates different from those in the above schedule if it can justify the service lives that the utility is proposing in lieu of the guideline lives. That justification should be in the form of historic data, technical information or utility planning for the affected accounts or sub-accounts. Common causes of need for different depreciation rates include composition of account, adverse environmental conditions, high growth or regulatory changes.

(b) A utility filing for such a revision of depreciation rates shall submit ten copies of the filing to the office of the Commission Clerk.

(c) For each account or function of depreciable plant addressed in the filing, the following shall be included:

1. A comparison of current and proposed depreciation rates and service lives. The proposed effective date of the new rates shall be identified.

2. A comparison of depreciation expenses resulting from current rates with those produced by the proposed rates. Plant balances used in this calculation shall be those as of the effective date of the proposed rates.

3. A general narrative defining the service environment of the applicant utility and the factors (e.g., composition of account, growth, environmental conditions, regulatory changes) leading to the present application for a revision in rates in the affected accounts.

4. Any statistics, data, analyses or calculations used in the development of the proposed average service lives.

(6) A utility may apply for guidelines for a proposal for implementation of remaining life depreciation rates under the following conditions:

(a) A Class A or B utility has maintained both plant activity data by account and accumulated provision for depreciation (reserve) data by account, function or total depreciable plant generally in accord with the Uniform System of Accounts for either at least ten years or since the inception of the utility, whichever is less.

(b) A Class C utility has maintained both plant activity data and accumulated provision for depreciation (reserve) data by account, function or total depreciable plant generally in accord with the Uniform System of Accounts for either at least ten years or since the inception of the utility, whichever is less.

(c) To provide time for study development, any application for remaining life guidelines should be submitted at least six months before the filing for a test year in connection with a request for a revenue rate increase.

(7) Prior to the date of retirement of major installations, the Commission may approve capital recovery schedules to correct associated calculated deficiencies in recovery where a utility demonstrates that retirement of the installation or

group of installations is prudent and the associated investment will not be recovered by the time of retirement through the normal depreciation process.

(8)(a) Contributions in Aid of Construction - Adequate records to account for CIAC must be maintained by the utility. Where adequate records separating CIAC from utility investments are maintained by account, depreciation rates shall be applied separately to contributed and non-contributed plant with the resulting amortization of contributed plant not considered an expense for ratemaking purposes. Where CIAC records are not kept by account, the depreciation rates shall be applied to the entire depreciable plant. The CIAC plant shall then be amortized either by account, function or bottom line depending on availability of supporting information. The amortization rate shall be that of the appropriate account or function where supporting documentation is available to identify the account or function of the related CIAC plant. Otherwise, the composite plant amortization rate shall be used. The depreciation expense then is the net of depreciation expense for total plant less the amortization of CIAC plant. The non-CIAC depreciation reserve is the net of depreciation reserve for total plant less the accumulated amortization of CIAC plant.

Specific Authority: 350.127(2), F.S.
Law Implemented: 350.115, 367.121(c), F.S.
History: New 3/22/84, formerly 25-10.32, Transferred from 25-10.032 and Amended 11/9/86, 5/8/88.

Company:

Schedule: B-6 (W)

Test Year Ended,
Interim [ ] Final [ ]
Historic [ ] Projected [ ]

Explanation: Provide a schedule of test year depreciation expense by primary account.

Recap Schedules: B-1 (W)
Supporting Schedules: A-4 (W)

Line No.	(1) Account No. and Name	(2)	(3) DEPRECIATION RATE Life	(4) DEPRECIATION RATE Rate (%)
1	INTANGIBLE PLANT			
2	301.1 Organization		40	2.5000%
3	302.1 Franchises		40	2.5000%
4	339.1 Other Plant & Misc.		25	4.0000%
5	SOURCE OF SUPPLY & PUMPING			
6	303.2 Land & Land Rights		0	N.A.
7	304.2 Structures & Improvements		33	3.0303%
8	305.2 Collect. & Impound.		50	2.0000%
9	306.2 Lake, River & Other		40	2.5000%
10	307.2 Wells & Springs		30/33	3.333%/3.030%
11	308.2 Infiltration Galleries		40	2.5000%
12	309.2 Supply Mains		35	2.8571%
13	310.2 Power Generation Eq.		20	5.0000%
14	311.2 Pumping Equipment		20	5.0000%
15	339.2 Other Plant & Misc.		25	4.0000%
16	WATER TREATMENT PLANT			
17	303.3 Land & Land Rights		0	N.A.
18	304.3 Structures & Improvements		33	3.0303%
19	320.3 Water Treatment Eq.		22	4.5455%
20	321.3 Permeators		5	20.0000%
21	339.3 Other Plant & Misc.		25	4.0000%
22	TRANSMISSION & DISTRIBUTION			
23	303.4 Land & Land Rights		0	N.A.
24	304.4 Structures & Improvements		33	3.0303%
25	330.4 Distr. Reservoirs		37	2.7027%
26	331.4 Transm. & Distribution		43	2.3256%
27	333.4 Services		40	2.5000%
28	334.4 Meters & Meter Installation		20	5.0000%
29	335.4 Hydrants		45	2.2222%
30	339.4 Other Plant & Misc		25	4.0000%
31	GENERAL PLANT			
32	303.5 Land & Land Rights		0	N.A.
33	304.5 Structures & Improvements		40	2.5000%
34	340.5 Office Furniture & Equipment		15	6.6667%
35	340.51 Computer Equipment		6	16.6667%
36	341.5 Transportation Equipment		6	16.6667%
37	342.5 Stores Equipment		18	5.5556%
38	343.5 Tools, Shop & Garage		16	6.2500%
39	344.5 Laboratory Equipment		15	6.6667%
40	345.5 Power Operated Equipment		12	8.3333%
41	346.5 Communication Equipment		10	10.0000%
42	347.5 Miscellaneous Equipment		15	6.6667%
43	348.5 Other Tangible Plant		10	10.0000%

Dep Rate : $\frac{100}{ASL}$

$= \frac{100}{40} = 2.5\%$

SUBJECT: BUREAU OF ECONOMIC REGULATION
ENGINEERING SECTION

NO. 2410 PAGE 1 OF 5
EFFECTIVE: 3/29/91
APPROVED: 3/29/91

I. TITLE - Cost Study Procedure

II. PURPOSE

To provide the Engineering Section with a formalized procedure for developing and/or evaluating cost studies pertaining to regulated water and wastewater utilities.

III. EXPLANATION

Because of growth and complexity of the regulatory functions, it has become necessary to establish uniform methods to be applied by all engineers in evaluating or developing cost studies applicable to capitalized accounts of regulated utilities involved in a rate proceeding or any other matter pertaining to the establishment of rate base.

It will be the responsibility of the Engineering Section to determine an adjusted total for original cost.

The Accounting Section will apply depreciation rates and arrive at a net book value.

IV. JUSTIFICATION FOR COST STUDY

The need for a cost study will normally materialize when sufficient records are not available to support utility rate base and/or total system cost.

It is recognized that there are frequent occasions which call for a cost re-construction for single or multiple items found in a system for which there are no supporting documents available for the balance of the system. This situation leads to the question of how much of a plant requiring cost reproduction will be the determinant requiring a study approval by the department director.

Recognizing that all cases are not alike in complexity and time required for staff investigation, the engineer should determine whether or not the cost re-construction will require more than a normal amount of

engineering staff time.

This determination will become a matter of judgement which should be coordinated with the engineering supervisor and the department director, if necessary.

The engineer shall obtain a memo authorizing an original cost study from the department director when the determination is made that such a study requires more time and effort than normally required in a comparable case and that such a study is deemed necessary.

V. PROCEDURE

1. A complete inventory of system components will be made and tabulated on the appropriate work sheet. The inventory will be arranged by NARUC Accounts and will contain all essential information to fully identify the component including quantities, unit of measurement and year installed.

2. Actual prices of like inventoried components installed elsewhere under similar conditions and date of installation as those being studied shall be obtained. These prices may be obtained from the P.S.C. Water and Wastewater engineering reference library, D.E.R. files, health department files or information from reliable contractors, vendors or consulting engineers.

3. The comparable prices obtained as outlined in para. 2 above will require trending to adjust the known costs to a cost fitting the actual date of installation of the components being "cost studied."

4. The trending will be accomplished by using the Handy Whitman Indexes for Water Utilities and the Environmental Protection Agencies Construction Indexes for sewer utilities. These references are maintained in current form in the P.S.C. Water and Wastewater Division reference library. The trending formula for each of these publications is noted in each of these publications and is

relatively simple to apply.

5. The above cited index publications serve to track construction costs of all components of water and wastewater systems from a historical base year to the present by application of all known escalation or de-escalation factors to the base period.

6. As an example you need to trend the known cost of a plant built in 1984 to a similiar plant built in 1968. Two of the items involved are shown on the attached worksheet: cast iron main and fire hydrants. For the cast iron main, the 1984 index in Handy-Whitman is 242 whereas the 1968 index is 83. Knowing costs were less in the past, you would take the ratio of the indices (83 to 242) and compute a factor of .343. Multiplying the known cost of $75,000 by .343 you would compute the trended cost in 1968 to be $25,725. For the hydrants, the indices are 267 in the 1984 and 68 in 1968, computing to a factor of .255. Multiplying the known cost of $4,500 by .255 you would find the trended cost is $1,148. Once the trended costs are found, you add 6% engineering and 10% A & G to arrive at the adjusted total. These percentages represent a conservative historical representation of actual allowable overhead costs for engineering and administrative and general costs incurred in the construction of the trended system. These percentages can vary in accordance with supporting data used by the engineer.

   Depreciation will be calculated by the Accounting Section of the Water and Wastewater Division.

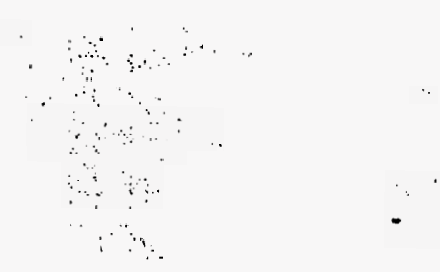
7. Sometimes you will locate some documentation in the utility's files supporting the original cost of equipment. Whenever possible enter the original cost information level of the base cost used for tending. The allowable level of these costs can also be found in the department reference library.

8. A and G and engineering costs should be added to the reproduced cost if these were not part of the base cost used for trending. The allowable level of these costs can also be found in the department reference library.

9. Caution must be exercised in developing costs of items to be trended to assure that installation conditions and characteristics of components are as alike as possible. For instance the use of well pointing in excavating can cause a considerable differential in costs compared to dry excavations. Another example is whether or not an installation of water or sewer main contains service stubs or not. There is a cost differential in pipe runs of straight mains versus the same run with "tees" or "ells" fittings added to provide for service connections.

10. Developing an original cost is not an exact science by any means. It is an engineering exercise requiring a cautious, intelligent and patient effort utilizing your basic engineering training.

11. The completed cost study should be carefully reviewed by the engineer's immediate supervisor prior to submittal to the record. Attachments (1).



PUBLIC SERVICE COMMISSION – DIVISION OF WATER AND WASTEWATER
STANDARD OPERATING PROCEDURE

SUBJECT: BUREAU OF ECONOMIC REGULATION
ENGINEERING SECTION

NO. 2410 PAGE 5 OF 5
EFFECTIVE: 3/29/91
APPROVED: 3/29/91

WATER XX
WASTE
WATER ___

UTILITY: A.B.C. WATER CO.
LOCATION: FT. MYERS, FL.
DOCKET NO: 840001-WU
YEAR INSTALLED: 1968

SUBDIVISION: ___
PHASE: ___
DATE: 1984
AGE: 16

Sheet 1 of 1 Sheets

ACCT	DESCRIPTION OR ITEM	QUAN	UNIT	UNIT COST REPLACEMENT	EXTENDED COST	TRENDING FACTOR	ORIG COST	ENG @ 6 %	ADMIN & GEN @ 10 %	ADJ TOTAL	DEP RATE %	TOTAL DEPREC	NET BOOK VALUE
343	12" Cast Iron pipe	5000	ft.	15.00/ft	75,000	.343	25,725	1544	2573	29,842			
345	Single Service	00	ea.	—	—	—	5,500	330	550	6,380			
348	Fire Hydrants 6"	10	ea.	450 Ea.	4,500	.255	1,148	69	115	1,332			

NOTE: The examples in Accounts 343 and 348 utilized the trending factor due to the absence of original cost information. Account 345 shows an example using original cost when the data is available as supported by invoices or contracts.

FACTORS: Acct. 343: 3/241 = .343 Acct. 348. 68/267 = .255

Imperial

Polk County

Board of County Commissioners

P.O. B
330 W. Ch
Bartow, Fl
Administration (813) 5
Customer Service (813) 534-6039, 5
Operations/Maintenance (813) 5

Utilities Division

January 10, 1994

Grenelefe Corporation
3200 State Road 546
Grenelefe, FL 33844
ATTN: CHUCK EDGE, UTILITIES MANAGER

ATTN: **1994 GRENELEFE FRANCHISE RENEWAL & RATE INCREASE REQUEST INFORMATION REQUEST #1**

Dear Mr. Edge:

As we discussed earlier, the County will retain a rate consultant to review Grenelefe's rate increase application. Grenelefe Corporation will be required to reimburse the County for the cost of the rate consultant. The rate case cost will be spread over three years and included as an expense in the rates.

The following information is required for the County's rate consultant to submit an agreement proposal for the review of the application and to determine whether the requirements in the last rate case have been satisfied:

1. Have you obtained a current operating permit? If not, why not and when do you expect to receive it?

2. What is the current number of connections?

3. What is the current number of dwelling units?

4. Have there been any additions to the facilities since the last rate increase in 1983? Please provide a schedule. And, have you taken any plants or systems offline or plan to within the next 3 to 5 years?

5. What percentage of the plant is used and useful?

6. Have the utility company's financial records been maintained in accordance with standard industry practices? If not, why not? This was a requirement of the 1983 rate resolution.

On the phone last week, you mentioned that you had retained an engineering consultant to do a complete evaluation of Grenelefe's water and wastewater systems. **As we discussed last summer, the** "replacement cost new" valuation of plants and systems or assets is not an acceptable asset valuation method with Polk County. Incidentally, the Public Service Commission does not allow replacement cost new valuation either. Howard Davidson is familiar with this technique **and that the County does not allow** it. **You may need to discuss this issue with Howard to make sure** you do not incur an expense for the engineering consultant that will not be included in the rates.

Thank you for your cooperation. If you have any questions please call me.

Sincerely,

Paula M. Short

Paula M. Short
Fiscal and Franchise Manager

enclosures: 1983 franchise agreement
1983 rate increase resolution

.cc Franchise File

grenelefe:94REQ1

7. Have water meters been installed for the purpose of determining fair rate distributions as required in the 1983 rate increase resolution? Have the meters been in place for at least the last 12 months? If not, why not?

This information will be submitted to the County rate consultant as soon as I receive your response. Upon receiving the agreement proposal from the County consultant, I will submit for your approval an agreement stating that Grenelefe will reimburse the County for the cost of the County retained rate consultant. After you sign the agreement proposal, I will take both agreements to the Polk County Utilities Commission for approval.

After the County hires the rate consultant, we will have a conference call with Grenelefe's rate consultant, the County's rate consultant, myself and any other person(s) you wish to involve to hopefully streamline the application process. All responses, questions or concerns are to be forwarded to me, at no time will your rate consultant, engineers, or anyone else be permitted to speak directly with the County rate consultant without my participation. Please communicate this to all concerned persons.

I have received Mary Adsit's letter to you dated June 7, 1993 in which she inquired as to whether you would be interested in servicing with water and wastewater the Alcoma and Pine Oaks property. Please bring me up to date on this issue. If your systems have the ability to service these properties and you are willing to service them, then you will need to prepare a new legal description of the expanded franchise area which would include these two new properties. Also, please review your current franchise area legal description (Exhibit A) as referenced in the 1983 Grenelefe Corporation franchise agreement (enclosed) to make sure it is correct and advise me of any descrepancies.

I will be forwarding a copy of the proposed franchise agreement renewal within the next couple of weeks for you to review and comment on.

Appendix C

ORIGINAL COST STUDY

OF

WASTEWATER TREATMENT FACILITIES

AT

GRENELEFE RESORT & CONFERENCE CENTER

POLK COUNTY, FLORIDA

10/6/6d

FOR

GRENELEFE UTILITIES

BY

SHEFFIELD ENGINEERING
4322 ANDERSON RD. • ORLANDO, FL. • 32812

C. W. SHEFFIELD, P.E.
President
(407) 658-0512

DECEMBER 1993

GRENELEFE RESORT & CONFERENCE CENTER

GRENELEFE UTILITIES

WASTEWATER TREATMENT PLANT & EFFLUENT DISPOSAL

ORIGINAL COST STUDY

ORIGINAL COST STUDY

OF

WASTEWATER TREATMENT - EFFLUENT DISPOSAL

FOR

GRENELEFE UTILITIES

POLK COUNTY, FLORIDA

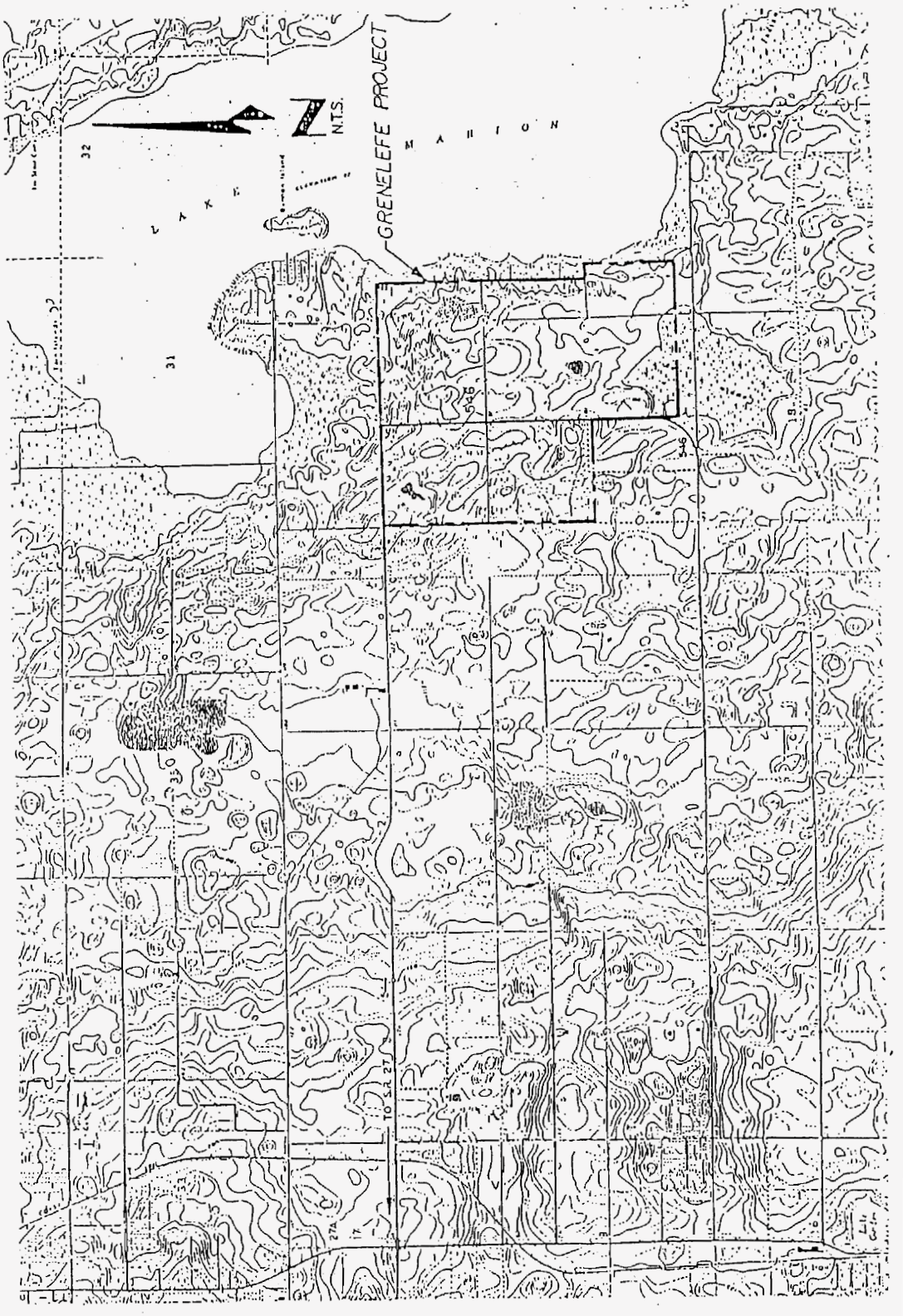
INTRODUCTION

This report is the result of a detailed review of the wastewater treatment system at Grenelefe Utilities, made by Sheffield Engineering & Associates personnel in June, July, August, September and October 1993. This study was to ascertain the original and replacement costs of the lift stations, wastewater treatment facilities, effluent disposal and properties owned by Grenelefe Utilities within Polk County, Florida.

This plant is located in middle Polk County. Your attention is directed to the location map (Figure 1) for general location of the project and Figure 2 for detailed location of the wastewater treatment facilities.

The object of this report is to determine the total adjusted original and 1993 replacement costs of the lift stations, force mains, appurtenances, wastewater treatment plant facilities, real property (at the wastewater treatment plant site), effluent lift station and force mains, effluent disposal facilities and appurtenances.

Most of the original cost of the Grenelefe Utilities wastewater facility was established by obtaining actual cost records from Grenelefe Resort accounting office. An original cost factor varied at this facility because it is from five to fifteen years old. The original total adjusted 1993 replacement cost was calculated using the original cost value plus 10% General and Administrative (G&A) costs plus 6% engineering costs. The



PROJECT LOCATION MAP
N.T.S.

FIGURE 1

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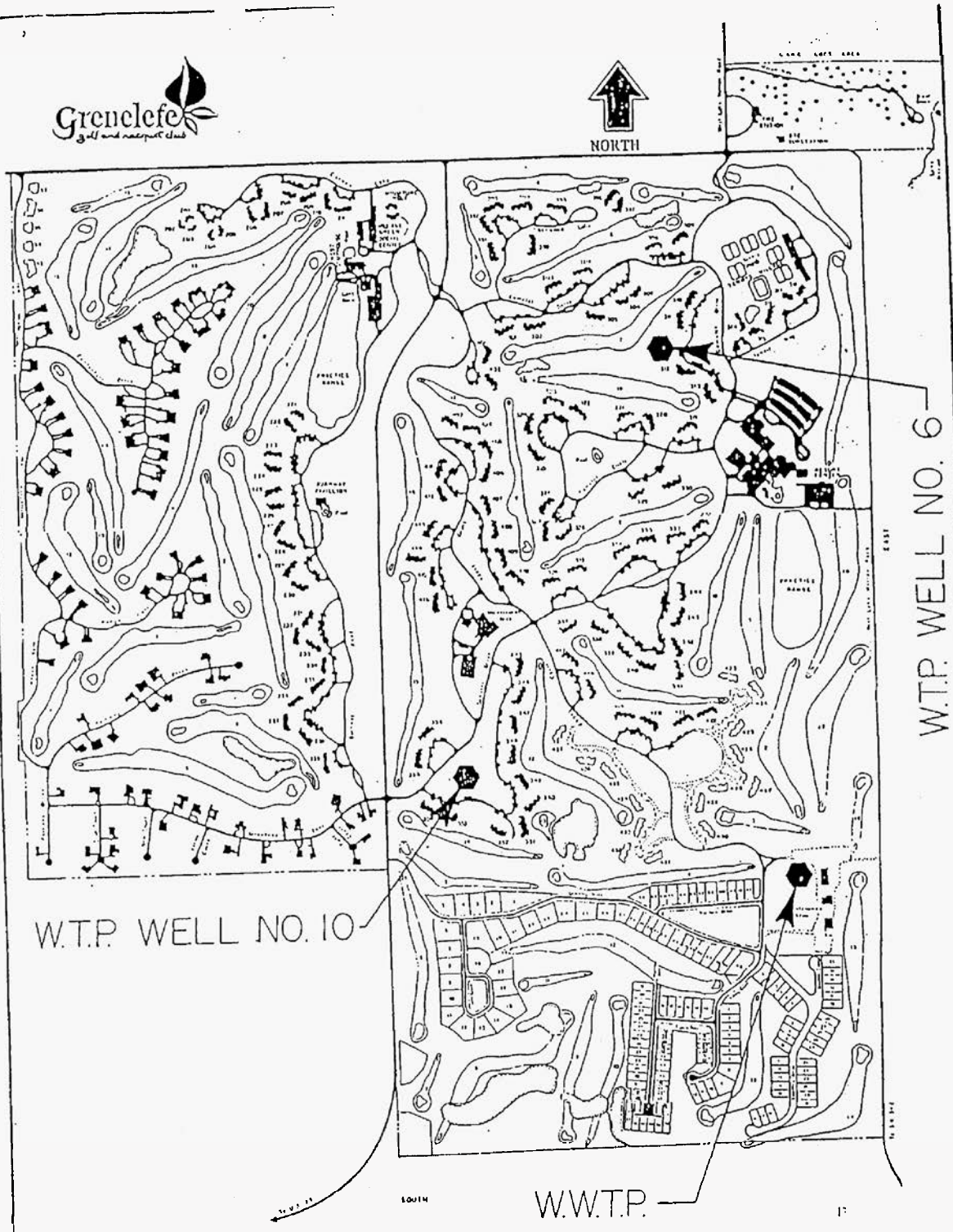

WATER AND WASTEWATER TREATMENT PLANT LOCATION MAP
N.T.S.

FIGURE 2

SHEFFIELD ENGINEERING
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Environmental Protection Agency Index and Engineering News Records (ENR) for wastewater construction and labor cost were used to determine original and replacement costs and depreciation value. The depreciated value was subtracted from the total adjusted original installation cost to obtain the net book value or cost. The data used in the calculation of wastewater treatment plant facility cost, owned by Grenelefe Utilities in Polk County, are shown on the enclosed detail sheets as Tables 7, 8 and 9.

DISCUSSION

This report is consistent with good accounting procedures. All the equipment and properties owned by Grenelefe Utilities, at this subject wastewater treatment facility, are listed according to the "Uniform Systems of Accounts For Wastewater Utilities." This booklet is published by the National Association of Railroad and Utilities Commissioners.

The original and replacement value cost of these facilities, owned by Grenelefe Utilities, were reviewed and then calculated in accordance with the Uniform Systems of Accounts as so suggested by the Florida Public Service Commission.

Sheffield Engineering & Associates personnel reviewed the subject plant in June through October 1993. From these detailed field reviews, it was determined the actual wastewater treatment plant facilities were in place.

The cost figures material, in Tables 7, 8 and 9 cost detail sheets, were obtained from either Grenelefe Resort & Conference Center accounting office, Grenelefe Utilities (Mr. Charles Edge, Utilities Manager) or using the best professional techniques available for studies of this nature. The data contained in Tables 7, 8 and 9 were basically obtained as follows:

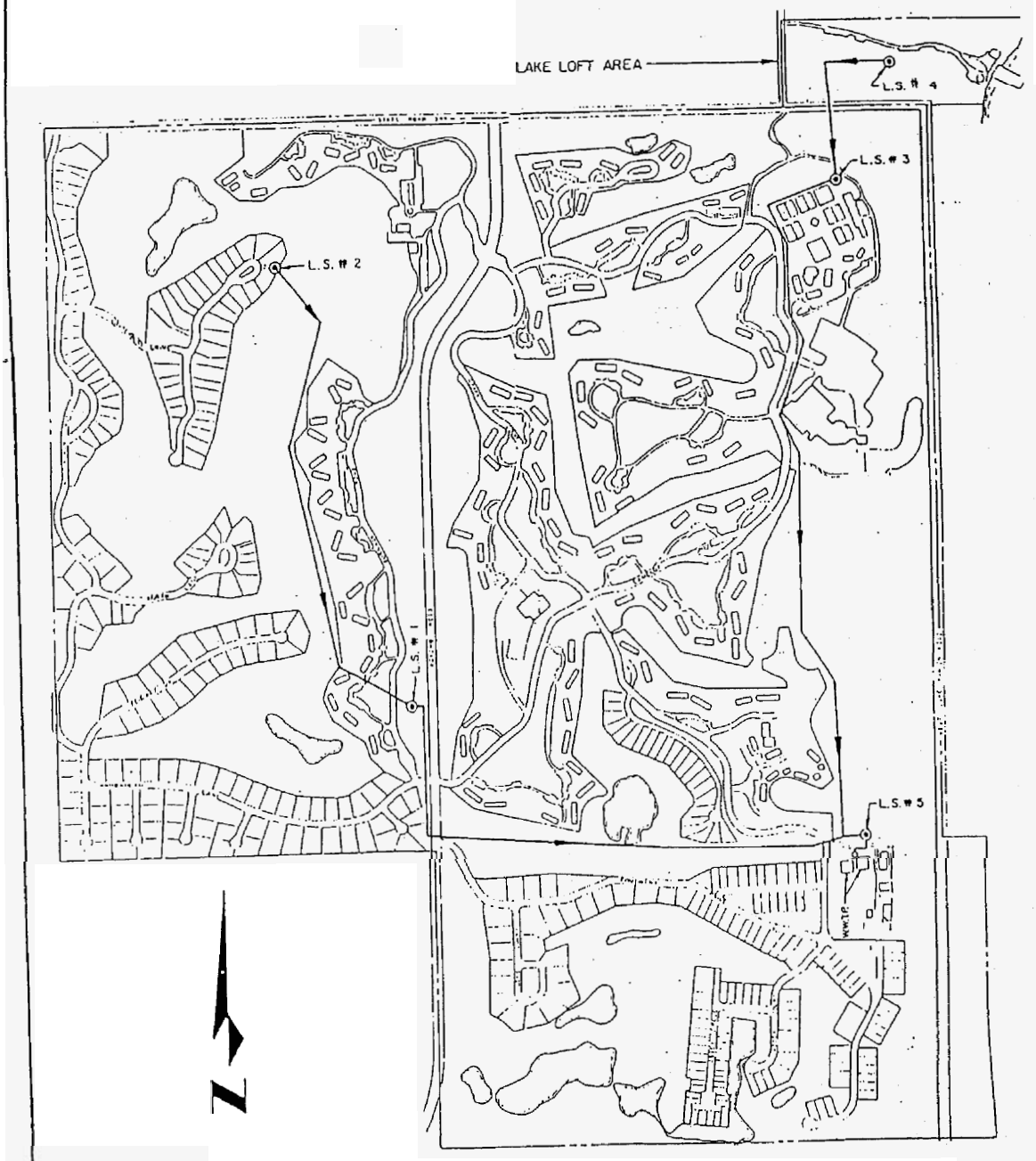
1. Grenelefe Resorts and Utilities files.
2. Field inspection of the physical properties at the wastewater treatment plant by Sheffield Engineering & Associates personnel.
3. Field verification of pipe sizes and location by probing and, in many instances, digging down to expose the pipe, valves and other appurtenances.
4. Review of Grenelefe Utilities and Accounting department records and files to obtain cost of equipment recently purchased.

5. File copies of the Wastewater Treatment Plant "as-built" Plans.
6. Contractors' costs on similar facilities.
7. Sheffield Engineering & Associates in-house costs from similar projects and from twenty years of experience in the wastewater utility field.

From Grenelefe Utilities information and field investigations, Figures 3 and 4 were prepared by Sheffield Engineering and Associates that indicate details of the wastewater treatment plant and its location. Figure 5 shows the effluent disposal consisting of evapo-percolation ponds, spray irrigation area and the monitoring well location. Figure 6 indicates the lift stations and force main location that pump the sewage to the wastewater treatment plant. These enclosed plans and maps should be considered a part of this report.

The company's transportation, communication and office equipment, as they are used for and by the total company needs, were part of the company's original cost. To determine the 1993 replacement costs, other contract prices and bids on recent projects by local contractors, were used. Also, prices were obtained from local suppliers on various types of equipment and material. In some instances, the prices were estimated using Sheffield Engineering past years' experience and records on similar projects.

For this report, a 10% general and administrative (G&A) cost was added to the original and replacement cost prices. This G&A cost reflects company overhead, legal fees, construction interest, preliminary cost and other costs of which Grenelefe Utilities has used its funds. A 6% engineering cost was also added to determine the total adjusted original and the 1993 replacement cost. This engineering cost reflects engineering design and inspection. Sheffield Engineering & Associates used the E.P.A. sewerage index and the Engineering News Record (ENR) Index for wastewater facilities construction and labor cost factors for the



LIFT STATION & FORCE MAIN LAYOUT
N.T.S.

FIGURE 6

SHEFFIELD ENGINEERING
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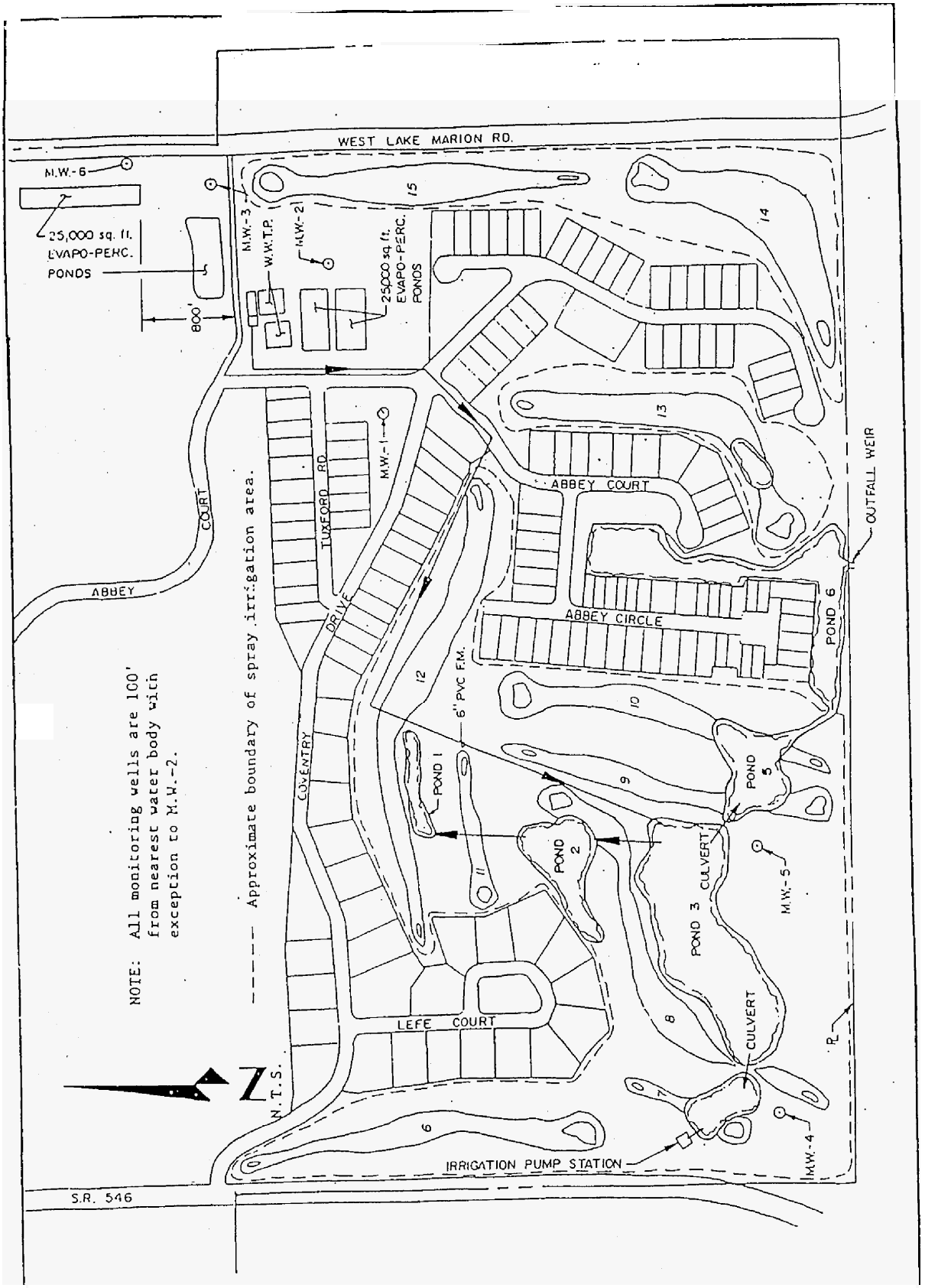
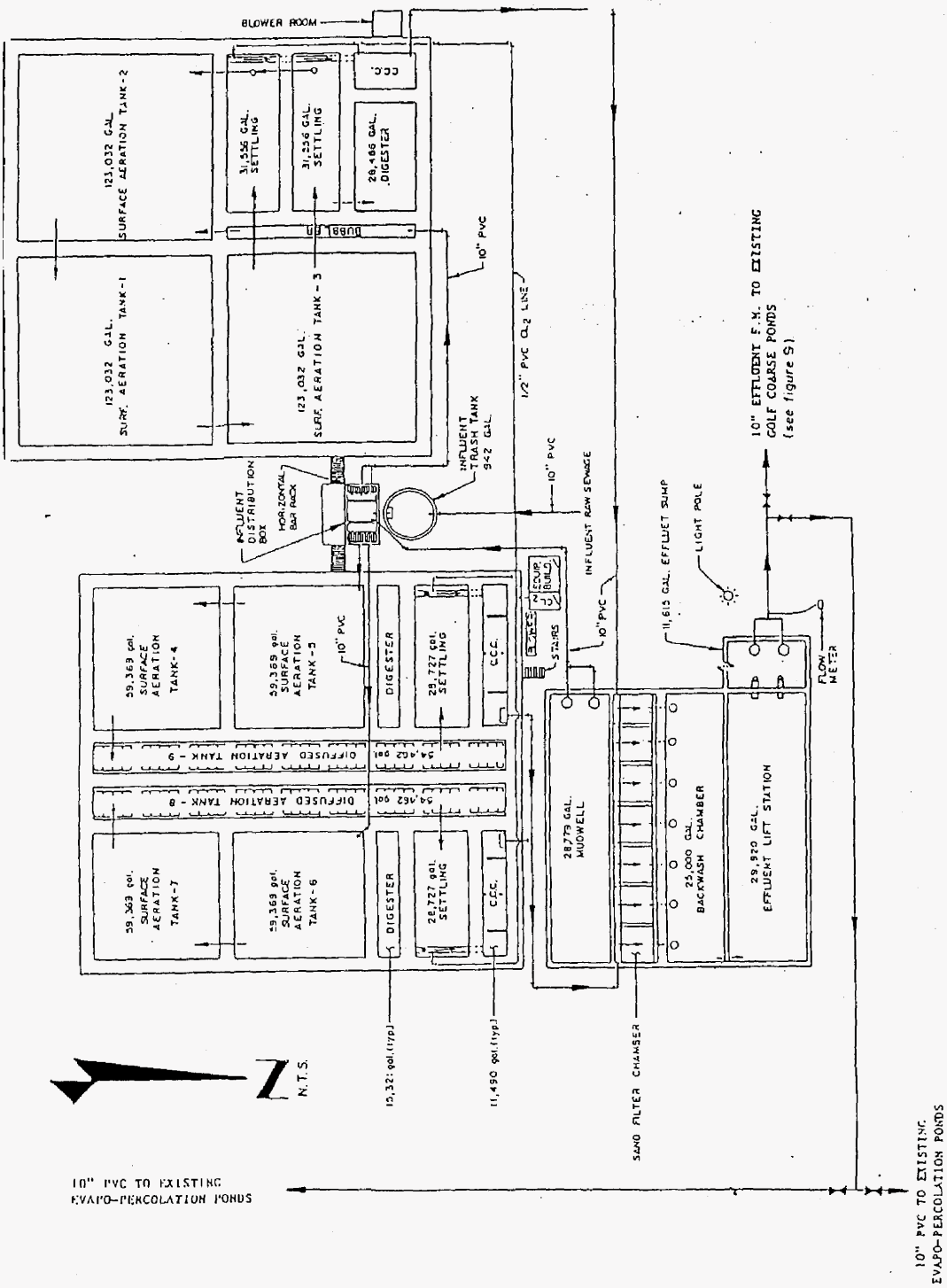


SOUTH GOLF COURSE SPRAY IRRIGATION FIELD, PONDS AND WELLS
N.T.S.

FIGURE 5



WASTEWATER TREATMENT PLANT SITE LAYOUT
N.T.S.

FIGURE 4

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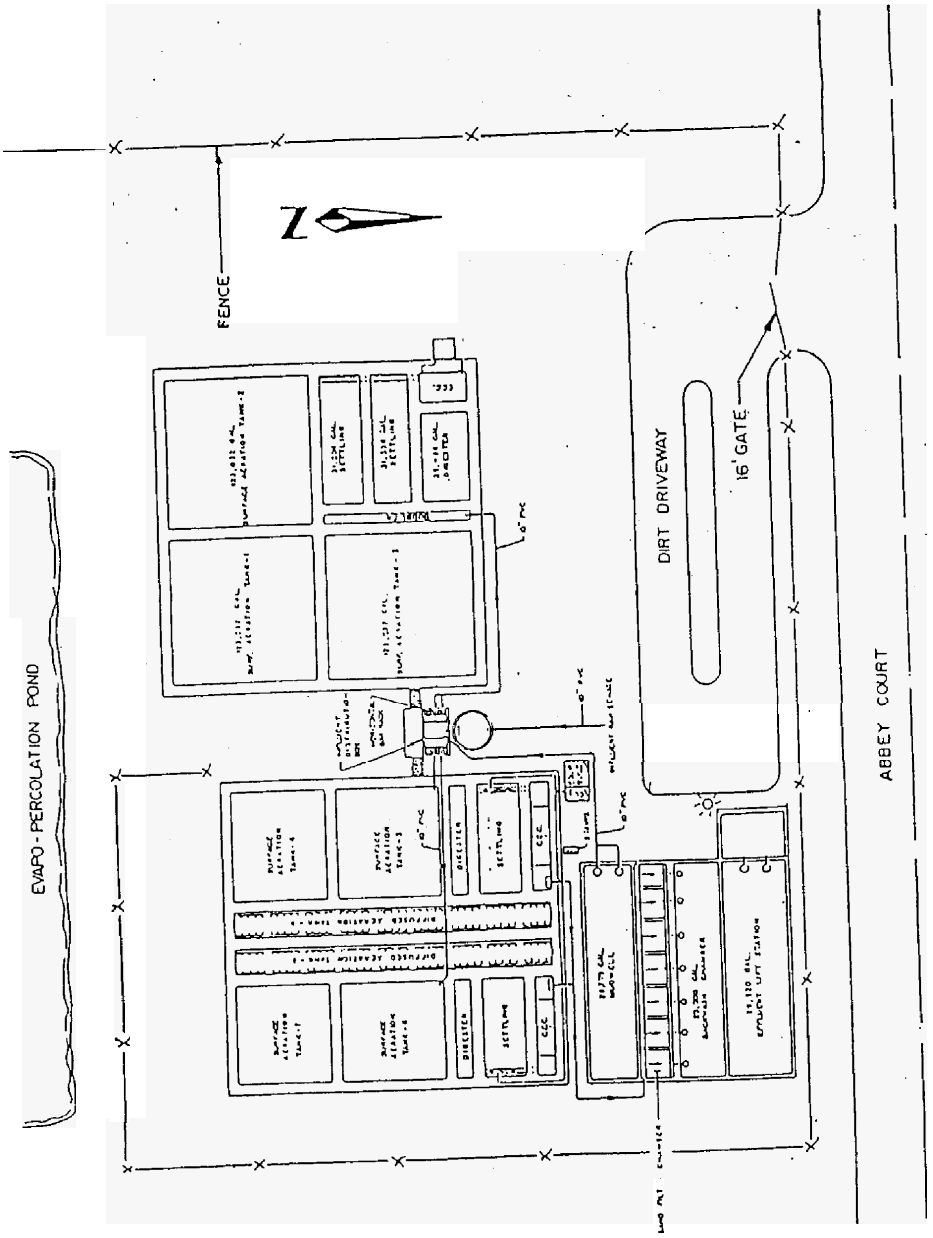

WASTEWATER TREATMENT PLANT SITE PLAN
N.T.S.

FIGURE 3

SHEFFIELD ENGINEERING
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past fifteen years. The calculated original cost factors varied because the facility is 5-15 years old.

In this report the accrued **depreciated value** of the water mains, equipment and other such items are as follows:

1. Fittings, Valves and Force Mains
   4 inch or smaller.....55 Years
2. Wastewater Treatment Plant Facilities.....20 Years
3. Effluent Pumps.....20 Years
4. Structures.....25 Years
5. Electrical Equipment and Wiring.....35 Years
6. Effluent Disposal (Percolation Ponds).....50 Years
7. Effluent Disposal (Spray Irrigation).....20 Years

These depreciation rates do not coincide with the values used for Grenelefe Utilities depreciation on a yearly basis. The above values do reflect those used in the determination of original and replacement value costs.

GRANELEFE WASTEWATER TREATMENT PLANT FACILITIES
NET BOOK VALUE
ORIGINAL COST LESS DEPRECIATION

TABLE 7

Acct No.	Description of Item	Avg. Svc. Life ASL	Year Const.	Age to 93	Qty	Units	Orig. Cost from G.L.U. or Eng. Est.	Engrg. Cost @ 6% Orig. Cost	Admin. Cost @ 10% Orig. Cost	Total Orig. Adjust. Cost	Deprec. Rate %/yr	Total Depreciat. Cost	Net Book Value Original Cost Less Deprec.
354	Lift Station Number 1	22	87	6	1	Complete Station	$76,571	54,600	$7,700	$88,900	4.55%	$24,300	$64,600
354	Lift Station Number 2	22	74	19	1	"	15,000 *	900	1,500	17,400	4.55	15,100	0
354	Lift Station Number 3	27	74	19	1	"	20,000 *	1,200	2,000	23,200	4.55	21,000	0
354	Lift Station Number 4	22	77	16	1	"	25,000 *	1,500	2,500	29,000	4.55	21,000	4,000
354	Lift Station Number 5	22	87	6	1	"	44,844	2,700	4,500	52,000	4.55	14,200	37,800
360	Force Main L.S. 2 to L.S. 1	22	74	19	3700 +-	ft. of 4"	13,000 *	800	1,300	14,100	4.55	13,000	0
360	Force Main L.S. 1 to L.S. 5	22	87	6	4130 +-	ft. of 4"	27,000 *	1,600	2,700	31,300	4.55	8,500	22,800
360	Force Main L.S. 4 to L.S. 3	27	77	16	1400 +-	ft. of 4"	6,300 *	400	600	7,300	3.70	4,300	3,000
360	Force Main L.S. 3 to L.S. 5	27	74	19	5000 +-	ft. of 4"	17,000 *	1,000	1,700	19,700	3.70	13,800	5,900
382	Outfall F.M. Spray Field	30	87	6	100' of	10" pipe	2,000 *	100	200	2,300	3.33	500	1,800
382	Outfall F.M. Spray Field	30	87	6	3500'	6" PVC	30,000 *	1,800	3,000	34,800	3.33	7,000	27,800
382	Outfall F.M.-ponds	30	87	6	500+	ft. of 10" pvc	8,500 *	500	800	9,800	3.33	3,500	6,300
360	Phase I (Initial) W.W.T.P. (.3MGD)	15	78	15	1	Entire W.W.T.P.	629,691	37,800	63,000	730,500	6.67	730,900	0
380	Phase II W.W.T.P. 0.3BMGD Addition	15	87	6	1	Entire W.W.T.P.	730,802	43,800	73,100	847,600	6.67	339,200	508,400
390	Office Furniture	15	91	2	varies	varies	300 *	200	30	400	6.67	50	350
390	Computer	8	91	2	1	4 water cooled	2,000 *	100	200	2,300	8.00	400	1,900
391	Transportation	6	76	17	2	Jeeps	14,000 *	800	1,400	16,200	16.67	16,500	0
393	Tools, shop	15	91	2	varies		500 *	30	50	600	6.67	100	500
394	Lab equipment	15	91	2	varies		200 *	20	20	300	6.67	50	250
371	Effluent Disposal Ponds	18	87	6	4	25,000 sq. ft	67,000 *	4,000	6,700	77,700	5.56	26,100	51,600
396	Communications	10	87	6	1	port. radio base sta.	10,000 *	600	1,000	11,600	10.0	7,000	4,600
397	Misc. Equipment	10	91	2	varies		500 *	30	50	600	10.0	150	450
300	Land Effluent Disposal Building	0	--	-	1.25A	$10,000 /acre	2,500 *	200	300	3,000	8.0	0	3,000
300	Land W.W.T.P. and ponds	0	--	-	4.0	$10,000 /acre	40,000 *	2,400	4,000	46,400	0	0	46,400
390	IRR Pressure Tank	15	87	6	1	1,000gal	5,000 *	300	500	5,800	6.67	3,800	2,000
371	W.W.T.P. Effluent Pump Equipment	18	87	6	2	pumps, piping	5,000 *	300	500	5,800	5.56	3,000	2,800
371	Spray Irrigation Pumps	18	87	6	3	Pump Ends, Elec. Motor	50,000 *	3,000	5,000	58,000	5.56	30,000	22,800
364	Metering Equipment	5	87	6	1		2,000 *	100	200	2,300	5.0	800	15,000
354	Oper. Building	15	87	6	1	Metal-Con. slab	1,000 *	60	100	1,200	6.67	500	700
380	Chlorination Equipment	7	87	6	1	Compl. System	2,500 *	150	250	2,900	14.28	2,500	400
	Monitoring Wells	10	87	6	6	Compl. System	6,000 *	400	600	7,000	10.0	4,200	2,800
	Estimate by Sheffield Engineering						1,854,208	111,252	185,421	2,150,000	100/ASL	1,311,500	824,450
							✓			✓			

1993 REPLACEMENT COST

TABLE 8

Acct	Description of Item	Avg. Svc. Life ASL	Year Const.	Age to 93	Qty	Units	Factor-HWI 1993/ Yr.Constr.	Conversion Factor	Orig. Cost from G.L.U.	Orig. Cost X 6% Eng.	Orig. Cost X 10% Admin.	Total Adjusted Cost-1993	Total Adj.Cost X Conv.Factor 1993 Replace. Cost
354	Lift Station Number 1	22	87	6	1	Complete Station	498.7/406.5	1.23	$76,571	4600	7700	$88,900	$109,000
354	Lift Station Number 2	22	74	19	1	"	498.7/217.2	2.30	15,000*	900	1500	17,400	40,020
354	Lift Station Number 3	27	74	19	1	"	498.7/217.2	2.30	20,000*	1200	2000	23,200	53,360
354	Lift Station Number 4	22	77	16	1	"	498.7/278.3	1.79	25,000*	1500	2500	29,000	51,900
354	Lift Station Number 5	22	87	6	1	"	498.7/406.5	1.23	44,844*	2700	4500	52,000	64,000
360	Force Main L.S. 2 to L.S. 1	22	74	19	3700' +-	ft. of 4"	498.7/217.2	2.30	13,000*	800	1300	14,100	32,400
360	Force Main L.S. 1 to L.S. 5	27	87	6	4150' +-	ft. of 4"	498.7/406.5	1.23	27,000*	1600	2700	31,300	38,500
360	Force Main L.S. 4 to L.S. 3	27	77	16	1400' +-	ft. of 4"	498.7/278.3	1.79	6,300*	400	600	7,300	13,000
360	Force Main L.S. 3 to L.S. 5	27	74	19	5000' +-	ft. of 4"	498.7/217.2	2.30	17,000*	1000	1700	19,700	45,300
382	Outfall F.M. Spray Field	30	87	6	100' of	10" pipe	498.7/406.5	1.23	2,000	100	200	2,300	2,800
382	Outfall F.M. Spray Field	30	87	6	3500'	6" PVC	498.7/406.5	1.23	30,000	1800	3000	34,800	42,800
382	Outfall F.M.-ponds	30	87	6	500+	ft. of 10" PVC	498.7/407.5	1.23	8,500	500	800	9,800	12,000
380	Phase I (Initial) W.W.T.P. (.3MGD)	15	78	15	1	Entire W.W.T.P.	498.7/304.6	1.63	629,691	37800	63000	730,500	1,191,000
380	Phase II W.W.T.P. 0.36MGD Addition	15	87	6	1	Entire W.W.T.P.	498.7/406.5	1.23	730,691	43800	73100	847,600	1,042,500
390	Office Furniture	15	91	2	varies	varies	498.7/467.4**	1.07	300*	20	30	400	500
390	Computer	8	91	2	1	& water & sewer	498.7/467.4**	1.07	2,000*	100	200	2,300	2,500
391	Transportation	6	76	17	2	Jeeps	498.7/262.7	1.90	14,000	800	1400	16,200	30,800
393	Tools, shop	15	91	2	varies		498.7/467.4*	1.07	500*	30	50	600	700
394	Lab equipment	15	91	2	varies		498.7/467.4*	1.07	200*	20	20	300	400
371	Effluent Disposal Ponds	18	87	6	4	25,000 sq. ft.	498.7/406.5	1.23	67,000*	4000	6700	77,700	95,600
396	Communications	10	87	6	1	port.radio &base sta.	498.7/406.5	1.23	10,000	600	1000	11,600	14,000
397	Misc. Equipment	10	91	2	varies		498.7/467.4*	1.07	500*	30	50	600	700
300	Land Effluent Disposal Building	0	--	-	.25A	$10,000 /acre	-	-	2,500	200	300	3,000	3,000
300	Land W.W.T.P. and ponds	0	--	-	4.0	$10,000 /acre	-	-	40,000	2400	4000	46,400	46,400
390	IRR Pressure Tank	15	87	6	1	1,000gal	498.7/406.5	1.23	5,000*	300	500	5,800	7,000
371	W.W.T.P. Effluent Pump Equipment	18	87	6	2	pumps, piping	498.7/406.5	1.23	5,000*	300	500	5,800	7,000
371	Spray Irrigation Pumps	18	87	6	3	Pumps,Pump Bldg,Motor	498.7/406.5	1.23	50,000*	3000	5000	58,000	71,000
364	Metering Equipment	5	87	6	1		498.7/406.5	1.23	2,000*	100	200	2,300	2,800
354	Oper. Building	15	87	6	1	Metal-Con.slab	498.7/406.5	1.23	1,000*	60	100	1,200	1,500
380	Chlorination Equipment	7	87	6	1	Compl. System	498.7/406.5	1.23	2,500*	150	250	2,900	3,600
	Monitoring Wells	10	87	6	6	Compl. System	498.7/406.5	1.23	6,000*	400	600	7,000	8,600
									1,854,097	124,710	185,500	2,150,000	3,036,180

GRENELEFE WASTEWATER TREATMENT PLANT FACILITIES
ESTIMATED & CALCULATED ORIGINAL COST
TABLE 9

:c	Description of Item	Avg. Svc. Life ASL	Year Const.	Age to 93	Qty	Units	Estimated 1993 Replacement Costs Unit Cost	Estimated 1993 Replacement Costs Total Cost	HWI Factor Yr. Const /1993	Convers Factor	Original Cost	Engrg. Est. @ 6% Orig. Cost	Admin. & Genl. @ 10% Orig. Cost	Total Adjusted Orig. Cost	Deprec. Rate %	Tot. Dep (using orig. cost)	Net Book Value (Orig. cost -Deprec)	Total Depreciation (using 1993 repl. cost)	Net Book Value (1993 Cost -Depreciation)
54	Lift Station Number 1	22	87	6	1	Complete Station	$90,000	$90,000*	406.5/498.7	.82	$73,800	$4,400	$7,400	$85,600	4.55%	$23,000	62,600	24,600	65,400
54	Lift Station Number 2	22	74	19	1	"	40,000	40,000*	217.2/498.7	.44	17,400	1,010	1,700	201,000	4.55	17,400	2,700	34,600	5,400
54	Lift Station Number 3	27	74	19	1	"	45,000	45,000*	217.2/498.7	.44	19,600	1,200	2,000	22,800	4.55	19,700	3,100	34,600	5,000
54	Lift Station Number 4	22	77	16	1	"	50,000	50,000*	278.3/498.7	.56	28,000	1,700	-2,800	32,400	4.55	23,600	8,800	38,900	6,100
54	Lift Station Number 5	22	87	6	1	"	54,000	54,000*	406.5/498.7	.82	44,300	2,700	4,400	51,400	4.55	14,000	37,400	14,700	39,300
60	Force Main L.S. 2 to L.S. 1	22	74	19	3700 +-	ft. of 4"	$8/ft. install	29,600*	217.2/498.7	.44	13,000	800	1,300	15,100	4.55	13,000	2,100	25,600	4,000
60	Force Main L.S. 1 to L.S. 5	22	87	6	4150 +-	ft. of 4"	$8/ft.	33,200*	278.3/498.7	.56	18,600	1,100	1,900	21,600	4.55	5,900	15,700	9,100	24,100
60	Force Main L.S. 4 to L.S. 3	27	77	16	1400 +-	ft. of 4"	$8/ft.	11,200*	278.2/498.7	.56	6,300	400	600	7,300	3.70	4,300	3,000	6,600	4,600
60	Force Main L.S. 3 to L.S. 5	27	74	19	5000 +-	ft. of 4"	$8/ft.	40,000	217.2/498.7	.44	32,800	2,000	3,300	36,100	3.70	26,800	11,300	28,100	10,000
82	Outfall F.M. Spray Field	30	87	6	100' of	10" pipe	$20/ft.	2,000*	406.5/498.7	.82	1,600	100	200	1,900	3.33	400	1,500	400	1,600
82	Outfall F.M. Spray Field	30	87	6	3500'	6" PVC	$10/ft	35,000*	406.5/498.7	.82	28,700	1,700	2,900	33,300	3.33	6,700	26,600	7,000	28,000
82	Outfall F.M.-ponds	30	87	6	500+	ft. of 10" PVC	$20/ft.	10,000*	406.5/498.7	.82	8,200	500	800	9,500	3.33	1,900	7,600	2,000	8,000
80	Phase I (Initial) W.W.T.P.	15	78	15	1	Entire W.W.T.P.	$5/gal.	1,500,000 (1)	304.6/498.7	.61	915,000	54,900	91,500	1,061,400	6.67	1,061,900	0	1,500,700	0
80	Phase II W.W.T.P. 0.36MGD	15	87	6	1	Entire W.W.T.P.	$5/gal.	1,900,000 (1)	406.5/498.7	.82	1,538,000	93,500	155,800	1,806,700	6.67	723,000	1,083,700	760,600	1,140,000
90	Office Furniture	15	91	2	varies	varies	500*	500*	467.4/498.7	.94	400	50	50	500	6.67	100	400	100	400
90	Computer	8	91	2	1	1 water 1 sewer	3,000*	3,000*	467.4/498.7	.94	2,800	200	300	3,300	8.00	500	2,800	500	2,500
91	Transportation	6	76	17	2	Jeeps	14,000	14,000*	262.7/498.7	.53	7,000	400	700	8,100	16.67	23,000	0	39,700	0
93	Tools, shop	15	91	2	varies		700*	700*	467.5/498.7	.94	650	50	50	750	6.67	150	600	50	650
94	Lab equipment	15	91	2	varies		500*	500*	467.5/498.7	.94	400	50	50	500	6.67	100	400	100	400
71	Effluent Disposal Ponds	18	87	6	4	8400yd ea.	$4/yd.	134,000*	406.5/498.7	.82	109,000	6,600	11,000	127,500	5.66	43,300	84,200	45,500	88,500
96	Communications	10	87	6	1	port. radio base sta.	-	12,000	406.5/498.7	.82	9,800	600	1,000	11,400	10.00	6,800	4,600	7,200	4,800
97	Misc. Equipment	10	91	2	varies		700*	700*	467.5/498.7	.94	650	50	50	750	10.00	150	600	150	550
00	Land Effluent Disposal Bui.	0	--	-	.25a	$10,000 /acre	2,500	2,500	-	-	2,500	200	300	2,500	0	0	3,000	0	3,000
00	Land W.W.T.P. and ponds	0	--	-	4.0	$10,000 /acre	40,000	40,000	-	-	40,000	2,400	4,000	46,400	0	0	46,400	0	46,400
50	IRR Pressure Tank	15	87	6	1	1,000gal		15,000*	406.5/498.7	.82	12,300	700	1,200	14,200	6.67	5,700	8,500	6,000	8,200
71	W.W.T.P. Effluent Pump Equipment	18	87	6	2	pumps, piping		25,000*	406.5/498.7	.82	20,500	1,200	[illegible]	[illegible]	5.56	7,900	15,800	8,300	16,700
1	Spray Irrigation Pumps	18	87	6	3	Pmps. Bldg. etc.		70,000*	406.5/498.7	.82	57,400	3,000	[illegible]	[illegible]	5.56	22,000	44,100	23,000	[illegible]
4	Metering Equipment	5	87	6	1			5,000*	406.5/498.7	.82	4,100	200	400	4,700	5.00	1,400	3,300	1,500	3,500
6	Oper. Building	15	87	6	1	Metal-Con. slab		5,000*	406.5/498.7	.82	4,100	200	400	4,700	6.67	1,900	2,800	2,000	3,000
0	Chlorination Equipment	7	87	6	1	Compl. System		5,000*	406.5/498.7	.82	4,100	200	400	4,700	14.28	4,300	400	4,300	700
	Monitoring Wells	10	87	6	6	Compl. System	2500 ea.	15,000*	406.5/498.7	.82	12,300	700	1,200	14,200	10.00	5,100	9,100	9,000	6,000
								4,207,400			3,054,200	182,800	307,200	3,601,200		2,064,000	1,493,100	2,559,700	1,523,[illegible]
								*Engineering estimate											

Estimated Total Adjusted 1993 Replacement Values: $4,207,000 + 6% + 10% = $4,880,500

WASTEWATER TREATMENT PLANT FACILITIES INFORMATION

These calculated and estimated original and replacement cost values are for the 0.3 MGD and 0.38 MGD wastewater treatment plants and appurtenances; lift stations and force mains and effluent disposal facilities at Grenelefe as follows:

1. Total adjusted original cost as provided to Sheffield Engineering & Associates by Grenelefe Utilities - Table 7.....~~$2,150,900~~ $2,150,000
2. Total Net Book Value (Total Adjusted Original Cost less depreciation)-Table 7..... $824,500
3. Calculated Total Adjusted 1993 Replacement Cost - Table 8.....$3,036,180
4. Estimated and calculated total adjusted original cost - Table 9.....$3,601,200
5. Estimated total adjusted 1993 replacement cost - Table 9.....$4,880,520
6. Net Book value using calculated total adjusted original cost less depreciation - Table 9.....$1,439,100

Note the estimated and calculated total adjusted original cost values (line 4) seems higher over the total adjusted original cost values (line 1). Lines 4 and 5 but it is felt this is a realistic calculated original and 1993 replacement cost for the lift stations, wastewater treatment plant and effluent disposal means.

CONCLUSIONS AND SUMMARY

The object of this report was to obtain the original and 1993 replacement costs of the lift stations, force mains, wastewater treatment plant, effluent disposal system and all real property owned by Grenelefe Utilities in Polk County. The system is generally located in middle Polk County, Florida as shown on the enclosed plan.

For this project it was calculated that the total adjusted original value of the lift station, force main plant and effluent disposal system was ~~$2,150,900~~ 2,150,000. The total net book value (T.A.O.C.) less depreciation was $824,500. The estimated total adjusted 1993 replacement cost for this wastewater facility was calculated to be $4,880,520.

Your attention is respectfully directed to the enclosed Tables 7, 8 and 9 for explanation of how total adjusted original and 1993 replacement costs were calculated on each item. These sheets give a detailed breakdown of the calculated and estimated original value, depreciation and 1993 replacement costs.

APPENDIX

GRENELEFE UTILITIES WASTEWATER TREATMENT PLANT
MATERIAL LIST

Lift Station #1 2 - 40 HP Sub pumps with 6" discharge

Lift Station #2 2 - 3.8 hp Flygt sub pumps with 6" discharge

Lift Station #3 1 - 9.4 hp Flygt sub. pump into 6" discharge
1 - 10.5 hp Gould sub pump into 6" discharge

Lift Station #4 2 - 5 hp Flygt sub pumps - 6" discharge

Lift Station #5 2 -

4" PVC F.M. 14.250 ft

6" PVC F.M. 3500 ft

10" PVC F.M. 600 ft

7,000 gallon trash tank

0.30 MGD E.A. plant with surface aeration

0.38 MGD E.A. plant with surface aeration

0.68 MGD Sand filters

Sand filters 25,000 gal clearwell backwash chamber

34,000 gallon mudwell tank

2,000 gallon influent dist box with bar rack

Blower: 1- 10 hp Sutorbuilt @ 225 cfm

Blower: 2- 20 hp Lamson each 550 cfm

30,000 gallon effluent sump tank

2 - 20 hp above grade splitcase pumps

4 - effluent disposal ponds 25,000 sq ft x 3'deep (each)

3 spray irrigation pumps Aurora Pumps 1 & 2 Aurora Model 10 L-8
Pump 3 Aurora Model 10R6-18

Irrigation system 1,000 gallon pressure tank

4 - Monitor wells each 25' deep

10' x 30' oper. building

Chlorinator dual switchover

Land: Ponds 25,000 sq. ft. /pond x 4 ponds = 2.3A
WWTP site 200' x 350' = 1.7A
4.0A

Land: IRR pump site = 100' x 100' = .25A

GREENLEFE
COST STUDY
PRICE INFORMATION
JANUARY 1994

1.	Small Building -	$40/sq. ft	Wren Const., Orlando
	Pressure tank -	$ 3/gal.	
2.	Chain link fence 6' -		
	3 strands barbed wire	$15/ft. 1993	Meridith Const. Co.
		$13/ft. 1991	" " "
	Stockyard Fence 7' high	$10/ft. 1993	" " "
		$ 9/ft. 1991	" " "
	Gates - 10' each swing	$100/gate 1993	" " "
		$100/gate 1991	" " "
3.	10' wide asphalt street with 8" sub-base	$12/ft.	Envirovista Const. Co.
		$11/ft. 1991	Ormond Beach, FL
4.	Pipe		
	10" D.I. yard piping and fittings	$50/ft.	Envirovista Const. Co.
	10" valves	$50/ea.	" " "
	4" PVC sch. 40 or equal inst.	$ 8/ft.	Meridith Const. Co.
	6" " " " " " "	$10/ft.	" " "
	10" " " " " " "	$20/ft.	" " "
5.	E.A. W.W.T.P. and equip.	$4-6/gal.	Meridith & A.B. Curls
6.	50 lb./day dual switch over chlorinator	$2,000	Ellis K. Phillips
	20 gal./day chem. feeder Pulstron installed	$ 750	" " "
7.	Earth work for ponds, nc large tree removal	$4-7/yd.	Meridith Const. Co.
		$8-12/yd. 1987)	piping, grassed
		$13/yd. 1991)	and splash pad
8.	Diesel motor with rt. angle drive on well points with auto start-up installed	$5,400	Envirovista
9.	Monitoring wells 25' deep	$2,500/each	Meridith Const. Co.
		$1,000/ea.(1987)	
10.	Tools, lab equipment, office furniture, communication equip. est. by S.E.A. personnel		

11. 1974 EPA index = 217.2/498.7 (1993) = .436
4" PVC = $8/ft. 1993 x .436 = $3.50/ft.
1907 EPA = 406.5/498.7 = .82 x $ 8/ft. = $6.50/ft.
1977 EPA = 278.3/498.7 = .56 x $ 8/ft. = $4.50/ft.
6" PVC F.M. = .82 x $10/ft. = $8.50/ft.
10" PVC F.M. = .82 x $20/ft. = $16.50/ft.

GRENELEFE UTILITIES
COST STUDIES

ENR 20 CITIES
1913 = 100

	Construction Cost	Difference Between Years	Percent Increase Yearly
1989	4606		
		174	3.6%
1990	4780		
		112	2.3%
1991	4892		
		100	2.0%
1992	4992		
		238	4.6%
1993	5230		

Example

1989 - 1990 difference = $\frac{174}{4780}$ = 3.6% increase
1990 ERN Index

GRENELEFE UTILITIES
COST STUDIES

HANDY WHITMAN, EPA & ENR INDEX

	ENR % Increase	EPA WWTP Cost Index Avg.Yr. Index	Well Elec. Pump Equip. (307-311)	Struct. at WTP (304)	Small WTP Equip. (320)	PVC Pipe (331)	Meter (331)
1973		182.6	100	100	100	-	100
1974		217.2	107	104	103	-	100
1975		250.0	136	124	134	100	93
1976		262.7	170	127	150	102	93
1977		278.3	177	136	158	105	100
1978		304.6	187	143	169	109	101
1979		335.0	198	157	185	116	109
1980		365.3	214	174	200	128	114
1981		396.7	233	187	220	133	127
1982		421.6	255	190	239	136	127
1983		420.9	270	200	257	135	128
1984		416.4	273	202	261	139	130
1985		413.3	281	215	272	143	135
1986		403.0	284	214	273	144	135
1987		406.5	285	217	277	138	135
1988		428.4	330	221	284	174	142
1989		441.0	309	227	294	214	135
1990	+3.6%	456.9	340	237	306	204	178
1991	+2.3%	467.4	357	232	303	191	156
1992	+2.0%	476.8	363	230	307	162	164
1993	+4.6%	498.7	369	243	314	166	207

Example of EPA index extension from 1990-93
1989 441.0 x 3.6% = 15.88

441.00
456/88 2 456/9 for year 1990
2

(b) In addition to the penalties and interest otherwise provided, the Commission may impose an additional penalty upon a utility for failure to pay regulatory assessment fees in a timely manner in accordance with s. 367.161, F.S.

(6) Any utility which requests an extension of not more than 30 days and remits, by the due date, an estimated fee payment of at least 90% of the actual fee due shall not be charged interest or penalty on the balance due if paid within the extension period.

(7) Any utility which fails to pay a penalty within 30 days after its assessment by the Commission shall be subject to interest applied to the penalty up to and including the date of payment of the penalty. Such interest shall be compounded monthly, based on the 30-day commercial paper rate for high-grade, unsecured notes sold through dealers by major corporations in multiples of $1,000 as regularly published in the Wall Street Journal.

Specific Authority: 350.127(2), F.S.
Law Implemented: 350.113, F.S.
History: New 5/18/83, formerly 25-10.24, Amended 10/16/86, Transferred from 25-10.024 and Amended 11/9/86, Amended 2/8/90.

25-30.125 System Maps and Records. Each utility shall maintain on file at its principal office located within the State, suitable maps, drawings and/or records of its system and facilities to show size, location, character, date of installation and installed cost of major items of plant and extension of facilities.

Specific Authority: 367.121, F.S.
Law Implemented: 367.121, F.S.
History: Amended 9/12/74, formerly 25-10.27, Transferred from 25-10.027 11/9/86.

25-30.130 Record of Complaints.

(1) Each utility shall maintain a record of each signed, written complaint received by the utility from any of that utility's customers.

(2) The record shall include the name and address of the complainant, the nature of the complaint, the date received, the result of the investigation, the disposition of the complaint and the date of the disposition of the complaint.

Specific Authority: 367.121, F.S.
Law Implemented: 367.121, F.S.
History: Amended 9/12/74, formerly 25-10.30, Transferred from 25-10.030 and Amended 11/9/86.

25-30.135 Tariffs.

(1) Each utility shall adopt and file tariffs in accordance with Chapter 25-9, Florida Administrative Code.

(2) No utility may modify or revise its rules or regulations or its schedules of rates and charges until the utility files and receives approval from the Commission for any such modification or revision.

(3) Each utility shall maintain for customer inspection upon request during regular business hours, a copy of Chapter 25-30, Florida Administrative Code, and a copy of the utility's tariffs, rules, regulations and schedules.

Specific Authority: 367.121, F.S.
Law Implemented: 367.081, F.S.
History: Amended 9/12/74, formerly 25-10.41, Transferred from 25-10.041 and Amended 11/9/86.

25-30.140 Depreciation.

(1) For the purpose of the rule, the following definitions apply:

(a) Account - Water and sewer plant accounts are defined in the NARUC Uniform System of Accounts adopted by Rule 25-30.115.

(b) Amortization - The gradual extinguishment of an amount in an account by distributing such amount over a fixed period.

(c) Asset - Any owned physical object (tangible) or right (intangible) having economic value to its owner.

(d) Average Remaining Life - The future expected service in years of the surviving plant at a given age.

(e) Average Service Life Depreciation Rate - The depreciation rate based on the expected average service to be experienced by the investment or account in question.

$$\text{A.S.L. Rate} = \frac{100\% - \text{Average Net Salvage \%}}{\text{Average Service Life}}$$

(f) Average Service Life - The economic service life that can be reasonably expected from the plant type in question. It is measured by the period of time the subject plant and its associated investment is included on the company's books as in service to the public. The average service life will typically be less than the potential physical life due to factors such as governmental requirements, growth or adverse operating conditions.

(g) Capitalization - Measures of the propriety of capitalization versus expensing as follows:

1. The addition of any retirement unit, or
2. Any replacement with a retirement unit that materially enhances the value, use, life expectancy, strength or capacity of the asset prior to replacement shall be capitalized.
3. The cost of incidental repairs that neither materially add to the value of the property nor appreciably prolong its life and that were made to keep the property in an ordinary efficient operating condition shall be accounted for as a maintenance expense.

(h) Cost of removal - The cost of demolishing, dismantling, tearing down or otherwise removing utility plant, including the cost of transportation and handling incidental thereto.

(i) Depreciation - As applied to depreciable utility plant, the loss in service value not restored by current maintenance incurred in connection with the consumption or prospective retirement of utility plant in the course of service from causes that are known to be in current operation and against which the utility is not protected by insurance. Among the causes to be given consideration are wear and tear, decay, action of the elements, inadequacy, obsolescence, changes in the art, changes in demand and requirements of public authorities. The intent of depreciation per this rule is to provide for recovery of invested capital and to match this recovery as nearly as possible to the useful life of the depreciable investment.

(j) Function - defined as follows:

Water	Sewer
Source of Supply (Accounts 304 to 309)	Collection Plant (Accounts 354 and 360 to 364)
Pumping Plant (Accounts 304, 310, 311)	Pumping Plant (Accounts 354, 370, 371)
Water Treatment Plant (Accounts 304, 320)	Treatment & Disposal Plant (Accounts 354 and 380 to 389)
Transmission & Distribution Plant (Accounts 304 and 330 to 339)	General Plant (Accounts 354 and 390 to 398)
General Plant (Accounts 304 and 340 to 348)	

(k) Mortality Data - See plant activity data.

(l) Net Salvage - The salvage value of property retired less the cost of removal. This is expressed as a percent of retirements in the depreciation rate formula.

(m) Original Cost - As applied to utility plant, the cost of such property to the person first devoting it to public service.

(n) Plant Activity Data - Annual additions, retirements, adjustments or transfers, sales or purchases, and investment balances at end of year.

(o) Property Retired - As applied to utility plant, property that has been removed, sold, abandoned, destroyed or which has been withdrawn from service for any cause.

(p) Remaining Life Depreciation Rate - The depreciation rate based on the average remaining portion of the service life expected to be experienced by the investment or account in question and on the net unrecovered capital for that investment or account.

$$\text{R.L. Rate} = \frac{100\% - \text{Accumulated Reserve \%} - \text{Future Net Salvage \%}}{\text{Average Remaining Life}}$$

The average remaining life for an account or sub-account is a function of known planned retirement or of the average age of that account and its appropriate mortality table.

(q) Replacing or Replacement - The construction or installation of utility plant in place of property retired, together with the removal of the property retired.

(r) Reserve - The accumulated provision for depreciation. The accumulated depreciation reserve is the net of depreciation accruals (expenses) and retired investment as well as any appropriate adjustments or transfers.

(s) Reserve Activity Data - Annual depreciation expense, retirements, transfers or adjustments and end of year balance for the accumulated provision for depreciation.

(t) Retirement Units - Those items of utility plant which, when retired with or without replacement, are accounted for by crediting the book cost to the utility plant account in which it is included.

(u) Salvage Value - The amount received for property retired, less any expenses incurred in connection with the sale or in preparing the property for sale or, if retained, the amount at which the material recoverable is chargeable to materials and supplies or other appropriate account.

(2) The average service life and salvage components for each class of utility are as follows:

(a) Water System Guideline Average Service Lives

Account	Description	Large Utility (Class A & B)	Small Utility (Class C)	Small Utility Function Composite[3] 28	Net Salvage[4]
1. Source of Supply					
304	Structures & Improvements	33[1]	28[1]		
	Frame	28	25		
	Masonry	30	27		
	Reinforced Concrete	40	37		
	Steel (tanks or sheds)	25	22		
	Fiberglass	20	18		
305	Collecting and Impounding Reservoirs	50	40		
306	Lake, River and Other Intakes	40	40		
307	Wells and Springs	30	27		
	Drilled & Cased Well (Floridan or Non-Corrosive)				
	Shallow Well (Sand Aquifer or Corrosive Water)	20	18		
308	Infiltration Galleries and Tunnels	40	N/A		
309	Supply Mains	35	32		

2. Pumping Plant				20
304	Structures and Improvements (see "Source of Supply" for subcategory lives)	33[1]	28[1]	
310	Power Generation	20	17	
311	Pumping Equipment	20	17	
	Electric Pumping Equip.	20	15	
3. Water Treatment Plant				21
304	Structures & Improvements (See "Source of Supply" for sub-category lives)	33[1]	28[1]	
320	Water Treatment Equip.	22[1]	17[1]	
	Chlorination Equip.	10	7	
	Other Mechanical Equip.	25	20	
4. Transmission & Distribution Plant				36
304	Structures & Improvements (See "Source of Supply" for sub-category lives)	33[1]	28[1]	
330	Distribution Reservoirs & Stand Pipes	37[1]	33[1]	
	Steel Pneumatic Tank	35	30	
	Concrete Ground Storage Reservoir	40	37	
331	Transmission & Distribution Mains	43[1]	38[1]	
	Galvanized Steel pipe & Fittings	35	33	
	Black Steel Pipe	20	18	
	Plastic Pipe	45	40	
	Asbestos - Cement	40	35	
	Cast Iron or Ductile Iron	40	36	
	Valves & Valve Boxes	25	20	
	Fire Mains	33	30	
333	Services	40	35	
334	Meters and Meter Installations	20	17	
335	Hydrants	45	40	
339	Other Plant and Miscellaneous Equip.	25	20	
5. General Plant				
304	Structures & Improvements	40[1]	35[1]	
	Reinforced Concrete Bldg.	45	40	
	Masonry Building	40	35	
	Wood Building	35	30	
	Steel Building	40	35	
	Tanks or Sheds	25	20	
340	Office Furniture & Equip.	15	15	
	Computers	6	6	0
341	Transportation Equip.	6	6	
342	Stores Equip.	18	N/A	14 (composite of 342-348)
343	Tools, Shop & Garage Equip.	16	15	
344	Laboratory Equip.	15	N/A	
345	Power Operated Equip.	12	10	
346	Communication Equip.	10	N/A	0
347	Miscellaneous Equip.	15	N/A	
348	Other Tangible Plant	10	10	

(b) Sewer System Guideline Average Services Lives

Salvage Account	Description	Large Utility (Class A & B)	Small Utility (Class C)	Small Utility Composite[3]	Not Function[4]
1.	Collection System			35	
354	Structures & Improvements	32[1]	27[1]		
	Above Grade				
	Reinforced concrete	38	35		
	Masonry	30	27		
	Frame	28	25		
	Steel	25	22		
	Below Grade				
	Concrete	35	32		
	Steel	22	20		
	Lift Stations	25	22		
360	Collection Sewers-Force[2]	30[1]	27[1]		
361	Collection Sewers-Gravity[2]	45	40		
	Manholes	30	27		
362	Special Collecting Structures	40	37		
363	Services to Customers[2]	38	35		
364	Flow Measuring Devices	5	5		
365	Flow Measuring Installations	38	35		
2.	Pumping Plant				18
354	Structures & Improvements	32[1]	27[1]		
370	Receiving Wells	30	25		
	Pumping Equip.	N/A	15		
371	Pumping Equip.	18	N/A		
3.	Treatment and Disposal Plant				18
354	Structures & Improvements (see "Collection System" for Subcategory lives.)	32[1]	27[1]		
380	Treatment & Disposal Equip.	18[1]	15[1]		
	Blowers, motors, pumps electric controls	15	12		
	Chlorination Equip.	10	7		
	Other Mechanical Equip.	23	18		
381	Plant Sewers	35	32		
382	Outfall Sewer Lines	30	30		
389	Other Plant and Miscellaneous Equip.	18	15		
4.	General Plant				
354	Structures & Improvements	40[1]	35[1]		
	Reinforced Concrete Bldg.	45	40		
	Masonry Building	40	35		
	Wood Building	35	30		
	Steel Building	40	35		
	Tanks or Sheds	25	20		
390	Office Furniture & Equip.	15	15		
	Computers	6	6		
391	Transportation Equip.	6	6		10
392	Stores Equip.	18	N/A		14 (composite of 392-398)
393	Tools, Shop & Garage Equip.	16	15		
394	Laboratory Equip.	15	N/A		

395	Power Operated Equip.	12	10	5
396	Communication Equip.	10	N/A	10
397	Miscellaneous Equip.	15	N/A	
398	Other Tangible Plant	10	10	

(c) For the purposes of paragraphs (2)(a) and (b), the following apply:

1. Denotes composite life.
2. Plastic pipe footnote - assumes use of AWWA standard pipe only. Assumes AWWA DR18 used for all mains of 6" or more.
3. To be used only when acceptable company plant balances are not available for developing composites using account lives.
4. Net Salvage zero except as indicated.

(3) Except as listed in Sections (5) and (6) of this rule average service life depreciation rates based on the guideline lives and salvages shall be used in rate proceedings before this Commission.

(4)(a) All Class A and B utilities shall maintain depreciation rates and reserve activity by account as prescribed by this Commission.

(b) All Class C utilities shall maintain depreciation rates and reserve activity data by total depreciable plant, function or account as prescribed by this Commission.

(5)(a) At the time a utility applies for a change in its revenue rates and charges, it may also petition for average service life depreciation rates different from those in the above schedule if it can justify the service lives that the utility is proposing in lieu of the guideline lives. That justification should be in the form of historic data, technical information or utility planning for the affected accounts or sub-accounts. Common causes of need for different depreciation rates include composition of account, adverse environmental conditions, high growth or regulatory changes.

(b) A utility filing for such a revision of depreciation rates shall submit ten copies of the filing to the office of the Commission Clerk.

(c) For each account or function of depreciable plant addressed in the filing, the following shall be included:

1. A comparison of current and proposed depreciation rates and service lives. The proposed effective date of the new rates shall be identified.
2. A comparison of depreciation expenses resulting from current rates with those produced by the proposed rates. Plant balances used in this calculation shall be those as of the effective date of the proposed rates.
3. A general narrative defining the service environment of the applicant utility and the factors (e.g., composition of account, growth, environmental conditions, regulatory changes) leading to the present application for a revision in rates in the affected accounts.
4. Any statistics, data, analyses or calculations used in the development of the proposed average service lives.

(6) A utility may apply for guidelines for a proposal for implementation of remaining life depreciation rates under the following conditions:

(a) A Class A or B utility has maintained both plant activity data by account and accumulated provision for depreciation (reserve) data by account, function or total depreciable plant generally in accord with the Uniform System of Accounts for either at least ten years or since the inception of the utility, whichever is less.

(b) A Class C utility has maintained both plant activity data and accumulated provision for depreciation (reserve) data by account, function or total depreciable plant generally in accord with the Uniform System of Accounts for either at least ten years or since the inception of the utility, whichever is less.

(c) To provide time for study development, any application for remaining life guidelines should be submitted at least six months before the filing for a test year in connection with a request for a revenue rate increase.

(7) Prior to the date of retirement of major installations, the Commission may approve capital recovery schedules to correct associated calculated deficiencies in recovery where a utility demonstrates that retirement of the installation or

group of installations is prudent and the associated investment will not be recovered by the time of retirement through the normal depreciation process.

(8)(a) Contributions in Aid of Construction - Adequate records to account for CIAC must be maintained by the utility. Where adequate records separating CIAC from utility investments are maintained by account, depreciation rates shall be applied separately to contributed and non-contributed plant with the resulting amortization of contributed plant not considered an expense for ratemaking purposes. Where CIAC records are not kept by account, the depreciation rates shall be applied to the entire depreciable plant. The CIAC plant shall then be amortized either by account, function or bottom line depending on availability of supporting information. The amortization rate shall be that of the appropriate account or function where supporting documentation is available to identify the account or function of the related CIAC plant. Otherwise, the composite plant amortization rate shall be used. The depreciation expense then is the net of depreciation expense for total plant less the amortization of CIAC plant. The non-CIAC depreciation reserve is the net of depreciation reserve for total plant less the accumulated amortization of CIAC plant.

Specific Authority: 350.127(2), F.S.
Law Implemented: 350.115, 367.121(c), F.S.
History: New 3/22/84, formerly 25-10.32, Transferred from 25-10.032 and Amended 11/9/86, 5/8/88.

Company:

Schedule: D-3 (P)

Test Year Ended:
Interim [ ] Final [ ]
Historic [ ] Projection [ ]

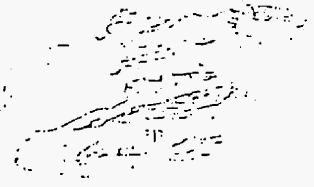
Explanation: Provide a schedule of test year depreciation expense by primary account.

Recap Schedules: B-1 (W)
Supporting Schedules: A-4 (W)

Line No.	Account No. and Name	(1)	(2)	(3) DEPRECIATION RATE Life	(4) DEPRECIATION RATE Rate (%)
1	INTANGIBLE PLANT			40	2.5000%
2	301.1 Organization			40	2.5000%
3	302.1 Franchises			25	4.0000%
4	303.1 Other Plant & Misc				
5	SOURCE OF SUPPLY & PUMPING			0	N.A.
6	303.2 Land & Land Rights			33	3.0303%
7	304.2 Structures & Improvements			50	2.0000%
8	305.2 Collect & Impound.			40	2.5000%
9	306.2 Lake, River & Other			30/33	3.3333%/3.030%
10	307.2 Wells & Springs			40	2.5000%
11	308.2 Infiltration Galleries			35	2.8571%
12	309.2 Supply Mains			20	5.0000%
13	310.2 Power Generation Eq			20	5.0000%
14	311.2 Pumping Equipment			25	4.0000%
15	339.2 Other Plant & Misc				
16	WATER TREATMENT PLANT			0	N.A.
17	303.3 Land & Land Rights			33	3.0303%
18	304.3 Structures & Improvements			22	4.5455%
19	320.3 Water Treatment Eq			5	20.0000%
20	321.3 Fermentors			25	4.0000%
21	339.3 Other Plant & Misc				
22	TRANSMISSION & DISTRIBUTION			0	N.A.
23	303.4 Land & Land Rights			33	3.0303%
24	304.4 Structures & Improvements			37	2.7027%
25	330.4 Dist. Reservoirs			43	2.3256%
26	331.4 Transm. & Distribution			40	2.5000%
27	333.4 Services			20	5.0000%
28	334.4 Meters & Meter Installation			45	2.2222%
29	335.4 Hydrants			25	4.0000%
30	339.4 Other Plant & Misc				
31	GENERAL PLANT			0	N.A.
32	303.5 Land & Land Rights			40	2.5000%
33	304.5 Structures & Improvements			15	6.6667%
34	340.5 Office Furniture & Equipment			9	10.0067%
35	340.51 Computer Equipment			6	16.6567%
36	341.5 Transportation Equipment			18	5.5556%
37	342.5 Stores Equipment			16	6.2500%
38	343.5 Tools, Shop & Garage			15	6.0067%
39	344.5 Laboratory Equipment			12	8.3333%
40	345.5 Power Operated Equipment			10	10.0000%
41	346.5 Communication Equipment			15	6.6667%
42	347.5 Miscellaneous Equipment			10	10.0000%
43	348.5 Other Tangible Plant				

Dep Rate : $\frac{100}{ASL}$

$= \frac{100}{40} = 2.5\%$



SUBJECT: BUREAU OF ECONOMIC REGULATION
ENGINEERING SECTION

NO. 2410 PAGE 1 OF 5
EFFECTIVE: 3/29/91
APPROVED: 3/29/91

I. TITLE - Cost Study Procedure

II. PURPOSE

To provide the Engineering Section with a formalized procedure for developing and/or evaluating cost studies pertaining to regulated water and wastewater utilities.

III. EXPLANATION

Because of growth and complexity of the regulatory functions, it has become necessary to establish uniform methods to be applied by all engineers in evaluating or developing cost studies applicable to capitalized accounts of regulated utilities involved in a rate proceeding or any other matter pertaining to the establishment of rate base.

It will be the responsibility of the Engineering Section to determine an adjusted total for original cost.

The Accounting Section will apply depreciation rates and arrive at a net book value.

IV. JUSTIFICATION FOR COST STUDY

The need for a cost study will normally materialize when sufficient records are not available to support utility rate base and/or total system cost.

It is recognized that there are frequent occasions which call for a cost re-construction for single or multiple items found in a system for which there are no supporting documents available for the balance of the system. This situation leads to the question of <u>how much</u> of a plant requiring cost reproduction will be the determinant requiring a study approval by the department director.

Recognizing that all cases are not alike in complexity and time required for staff investigation, the engineer should determine whether or not the cost re-construction will require more than a normal amount of

engineering staff time.

This determination will become a matter of judgement which should be coordinated with the engineering supervisor and the department director, if necessary.

The engineer shall obtain a memo authorizing an original cost study from the department director when the determination is made that such a study requires more time and effort than normally required in a comparable case and that such a study is deemed necessary.

V. PROCEDURE

1. A complete inventory of system components will be made and tabulated on the appropriate work sheet. The inventory will be arranged by NARUC Accounts and will contain all essential information to fully identify the component including quantities, unit of measurement and year installed.

2. Actual prices of like inventoried components installed elsewhere under similar conditions and date of installation as those being studied shall be obtained. These prices may be obtained from the P.S.C. Water and Wastewater engineering reference library, D.E.R. files, health department files or information from reliable contractors, vendors or consulting engineers.

3. The comparable prices obtained as outlined in para. 2 above will require trending to adjust the known costs to a cost fitting the actual date of installation of the components being "cost studied."

4. The trending will be accomplished by using the Handy Whitman Indexes for Water Utilities and the Environmental Protection Agencies Construction Indexes for sewer utilities. These references are maintained in current form in the P.S.C. Water and Wastewater Division reference library. The trending formula for each of these publications is noted in each of these publications and is

relatively simple to apply.

5. The above cited index publications serve to track construction costs of all components of water and wastewater systems from a historical base year to the present by application of all known escalation or de-escalation factors to the base period.

6. As an example you need to trend the known cost of a plant built in 1984 to a similiar plant built in 1968. Two of the items involved are shown on the attached worksheet: cast iron main and fire hydrants. For the cast iron main, the 1984 index in Handy-Whitman is 242 whereas the 1968 index is 83. Knowing costs were less in the past, you would take the ratio of the indices (83 to 242) and compute a factor of .343. Multiplying the known cost of $75,000 by .343 you would compute the trended cost in 1968 to be $25,725. For the hydrants, the indices are 267 in the 1984 and 68 in 1968, computing to a factor of .255. Multiplying the known cost of $4,500 by .255 you would find the trended cost is $1,148. Once the trended costs are found, you add 6% engineering and 10% A & G to arrive at the adjusted total. These percentages represent a conservative historical representation of actual allowable overhead costs for engineering and administrative and general costs incurred in the construction of the trended system. These percentages can vary in accordance with supporting data used by the engineer.

   Depreciation will be calculated by the Accounting Section of the Water and Wastewater Division.

7. Sometimes you will locate some documentation in the utility's files supporting the original cost of equipment. Whenever possible enter the original cost information level of the base cost used for tending. The allowable level of these costs can also be found in the department reference library.

8. A and G and engineering costs should be added to the reproduced cost if these were not part of the base cost used for trending. The allowable level of these costs can also be found in the department reference library.

9. Caution must be exercised in developing costs of items to be trended to assure that installation conditions and characteristics of components are as alike as possible. For instance the use of well pointing in excavating can cause a considerable differential in costs compared to dry excavations. Another example is whether or not an installation of water or sewer main contains service stubs or not. There is a cost differential in pipe runs of straight mains versus the same run with "tees" or "ells" fittings added to provide for service connections.

10. Developing an original cost is not an exact science by any means. It is an engineering exercise requiring a cautious, intelligent and patient effort utilizing your basic engineering training.

11. The completed cost study should be carefully reviewed by the engineer's immediate supervisor prior to submittal to the record. Attachments (1).

SUBJECT: BUREAU OF ECONOMIC REGULATION
ENGINEERING SECTION

EFFECTIVE: 3/29/91
APPROVED: 3/29/91

WATER XX
WASTE
WATER ___

UTILITY: A.B.C. WATER CO.
LOCATION: FT. MYERS, FL.
DOCKET NO: 840001-WU
YEAR INSTALLED: 1968

SUBDIVISION: _____
PHASE: _____
DATE: 1984
AGE: 16

Sheet 1 of 1 Sheets

ACCT	DESCRIPTION OF ITEM	QUAN	UNIT	UNIT COST REPLACEMENT	EXTENDED	TRENDED COST FACTOR	ORIG COST	ENG @ 6 %	ADMIN & GEN @ 10 %	ADJ TOTAL	DEP RATE %	TOTAL DEPREC	NET BOOK VALUE
343	12" Cast Iron pipe	5000	ft.	15.00/ft	75,000	.343	25,725	1544	2573	29,842			
345	Single Service	100	ea.	--	--	--	5,500	330	550	6,380			
348	Fire Hydrants 5"	10	ea.	450 Ea.	4,500	.255	1,148	69	115	1,332			

NOTE: The examples in Accounts 343 and 348 utilized the trending factor due to the absence of original cost information. Account 345 shows an example using original cost when the data is available as supported by invoices or contracts.

FACTORS: Acct. 343: 83/242 = .343 Acct. 348: 68/267 = .255

Imperial

Polk County

Board of County Commissioners

Utilities Division

P.O. Box 20
330 W. Church S
Bartow, FL 338
Administration (813) 534-67
Customer Service (813) 534-6039, 534-60
Operations/Maintenance (813) 533-40

January 10, 1994

Grenelefe Corporation
3200 State Road 546
Grenelefe, FL 33844
ATTN: CHUCK EDGE, UTILITIES MANAGER

ATTN: 1994 GRENELEFE FRANCHISE RENEWAL & **RATE INCREASE REQUEST**
INFORMATION REQUEST #1

Dear Mr. Edge:

As we discussed earlier, the County will retain a rate consultant to review Grenelefe's rate increase application. Grenelefe Corporation will be required to reimburse the County for the cost of the rate consultant. The rate case cost will be spread over three years and included as an expense in the rates.

The following information is required for the County's rate consultant to submit an agreement proposal for the review of the application and to determine whether the requirements in the last rate case have been satisfied:

1. Have you obtained a current operating permit? If not, why not and when do you expect to receive it?

2. What is the current number of connections?

3. What is the current number of dwelling units?

4. Have there been any additions to the facilities since the last rate increase in 1983? Please provide a schedule. And, have you taken any plants or systems offline or plan to within the next 3 to 5 years?

5. What percentage of the plant is used and useful?

6. Have the utility company's financial records been maintained in accordance with standard industry practices? If not, why not? This was a requirement of the 1983 rate resolution.

7. Have water meters been installed for the purpose of determining fair rate distributions as required in the 1983 rate increase resolution? Have the meters been in place for at least the last 12 months? If not, why not?

This information will be submitted to the County rate consultant as soon as I receive your response. Upon receiving the agreement proposal from the County consultant, I will submit for your approval an agreement stating that Grenelefe will reimburse the County for the cost of the County retained rate consultant. After you sign the agreement proposal, I will take both agreements to the Polk County Utilities Commission for approval.

After the County hires the rate consultant, we will have a conference call with Grenelefe's rate consultant, the County's rate consultant, myself and any other person(s) you wish to involve to hopefully streamline the application process. All responses, questions or concerns are to be forwarded to me, at no time will your rate consultant, engineers, or anyone else be permitted to speak directly with the County rate consultant without my participation. Please communicate this to all concerned persons.

I have received Mary Adsit's letter to you dated June 7, 1993 in which she inquired as to whether you would be interested in servicing with water and wastewater the Alcoma and Pine Oaks property. Please bring me up to date on this issue. If your systems have the ability to service these properties and you are willing to service them, then you will need to prepare a new legal description of the expanded franchise area which would include these two new properties. Also, please review your current franchise area legal description (Exhibit A) as referenced in the 1983 Grenelefe Corporation franchise agreement (enclosed) to make sure it is correct and advise me of any descrepancies.

I will be forwarding a copy of the proposed franchise agreement renewal within the next couple of weeks for you to review and comment on.

On the phone last week, you mentioned that you had retained an engineering consultant to do a complete evaluation of Grenelefe's water and wastewater systems. As we discussed last summer, the "replacement cost new" valuation of plants and systems or assets is not an acceptable asset valuation method with Polk County. Incidentally, the Public Service Commission does not allow replacement cost new valuation either. Howard Davidson is familiar with this technique and that the County does not allow it. You may need to discuss this issue with Howard to make sure you do not incur an expense for the engineering consultant that will not be included in the rates.

Thank you for your cooperation. If you have any questions please call me.

Sincerely,

Paula M. Short

Paula M. Short
Fiscal and Franchise Manager

enclosures: 1983 franchise agreement
1983 rate increase resolution

.cc Franchise File

grenelefe:94REQ1

Grenelefe Utilties, Inc
Calculation of Rate Base
June 30, 2002

	Water	Wastewater	Total
Plant in Service	$ 3,411,084	$ 2,866,595	$ 6,277,679
Land	7,000	49,400	56,400
Contributions in Aid of Construction	(9,612)	(6,408)	(16,020)
Accumulated Depreciation	(1,578,581)	(2,218,473)	(3,797,054)
Accum Amort of CIAC	2,946	2,629	5,575
Net Rate Base	$ 1,832,837	$ 693,743	$ 2,526,580

…Utilities
…alculation of Accumulated Depreciation
…s of July 1, 2003

Plant Balances by year

Account	Title	Life	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
303	Land	0	-	-	-	3,000	3,000	3,000	3,000	3,000	3,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000	7,000
304	Structures	33	-	-	-	4,800	4,800	4,800	4,800	4,800	4,800	9,240	9,240	9,240	9,240	9,240	9,240	23,800	23,800	519,558	519,558	519,558	519,558	519,558	519,558	519,558	519,558	519,558	519,558	519,558
307	Wells	30	-	-	-	-	31,138	82,138	82,138	82,138	82,138	244,081	244,081	244,081	244,081	244,081	244,081	297,800	297,556	297,556	297,556	297,556	297,556	297,556	297,556	297,556	297,556	297,556	297,556	297,556
310	Power Generation	20	-	-	-	88,200	88,200	88,200	88,200	88,200	88,200	108,780	108,780	108,780	108,780	108,780	108,780	108,780	108,780	108,780	108,780	108,780	108,780	108,780	108,780	108,780	108,780	108,780	108,780	108,780
311	Pumping	20	-	-	-	8,300	17,310	17,310	17,310	17,310	17,310	58,470	55,470	55,470	55,470	55,470	55,470	69,280	69,280	69,280	69,280	69,280	69,280	69,280	69,280	69,280	69,280	69,280	69,280	69,280
320	Treatment	22	-	-	-	2,000	2,800	2,800	2,800	2,800	2,800	5,800	5,800	5,800	5,800	5,800	5,800	5,800	5,800	7,800	7,800	7,800	7,800	7,800	7,800	7,800	7,800	7,800	7,800	7,800
330	Reservoirs	37	-	-	-	37,800	37,000	37,000	37,000	37,000	37,000	74,120	74,120	74,120	74,120	74,120	74,120	74,120	74,120	74,120	74,120	74,120	74,120	74,120	74,120	74,120	74,120	74,120	74,120	74,120
331	Mains	43	-	-	-	-	344,488	344,488	344,488	344,488	344,488	1,180,636	1,180,636	1,180,636	1,180,636	1,180,636	1,180,636	1,824,752	1,824,752	1,824,752	1,824,752	1,824,752	1,824,752	1,824,752	1,824,752	1,824,752	1,824,752	1,824,752	1,824,752	1,824,752
333	Services	40	-	-	-	-	23,250	23,250	23,250	23,250	23,250	58,087	58,087	58,087	58,087	58,087	58,087	98,148	98,148	98,148	98,148	98,148	98,148	98,148	98,148	98,148	98,148	98,148	98,148	98,148
334	Meters	20	-	-	-	-	38,453	38,453	38,453	38,453	38,453	91,087	91,087	91,087	91,087	91,087	91,087	153,801	153,801	214,241	214,241	214,241	214,241	214,241	214,241	214,241	214,241	214,241	214,241	214,241
335	Hydrants	45	-	-	-	-	14,307	14,307	14,307	14,307	14,307	44,942	44,942	44,942	44,942	44,942	44,942	63,720	63,720	63,720	63,720	63,720	63,720	63,720	63,720	63,720	63,720	63,720	63,720	63,720
340	Equip	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	580	580	580	12,820	12,820	12,820	12,820	12,820	12,820	12,820	12,820	12,820	12,820	12,820
341	Transportation	6	-	-	8,120	8,120	8,120	8,120	8,120	8,120	8,120	8,120	13,820	13,820	13,820	13,820	13,920	13,820	13,820	13,820	13,820	13,820	13,920	13,820	13,820	13,920	13,820	13,820	13,820	13,820
343	Tools	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,870	2,870	2,870	2,870	2,870	2,870	2,870	2,870	2,870	2,870	2,870
344	Lab	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,130	1,130	1,130	1,130	1,130	1,130	1,130	1,130	1,130	1,130	1,130
346	Communication	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,800	1,800	1,800	1,800	1,800	1,800	1,800	1,800	1,800	1,800	1,800
347	Miscellaneous	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,380	2,380	2,380	2,380	2,380	2,380	2,380	2,380	2,380	2,380	2,380
	Total Water Plant		-	-	8,120	153,120	610,784	661,784	661,784	661,784	661,784	1,885,335	1,891,135	1,891,135	1,891,135	1,891,135	1,891,715	2,839,334	2,839,334	3,418,084	3,418,084	3,418,084	3,418,084	3,418,084	3,418,084	3,418,084	3,418,084	3,418,084	3,418,084	3,418,084
353	Land	0	49,400	49,400	49,400	49,400	49,400	49,400	49,400	49,400	49,400	49,400	49,400	49,400	49,400	49,400	49,400	49,400	49,400	49,400	49,400	49,400	49,400	49,400	49,400	49,400	49,400	49,400	49,400	49,400
354	Structures	32	-	-	-	-	-	-	-	-	-	-	-	-	-	78,800	78,800	78,800	78,800	78,800	78,800	78,800	78,800	78,800	78,800	78,800	78,800	78,800	78,800	78,800
360	Force	30	33,800	33,800	33,800	41,100	41,100	41,100	41,100	41,100	41,100	41,100	41,100	41,100	41,100	72,400	72,400	72,400	72,400	72,400	72,400	72,400	72,400	72,400	72,400	72,400	72,400	72,400	72,400	72,400
361	Gravity	45	-	-	-	-	183,017	183,017	183,017	183,017	183,017	445,418	445,418	445,418	445,418	445,418	445,418	682,472	682,472	682,472	682,472	682,472	682,472	682,472	682,472	682,472	682,472	682,472	682,472	682,472
363	Services	38	-	-	-	-	19,786	19,786	19,786	19,786	19,786	49,440	49,440	49,440	49,440	49,440	49,440	83,523	83,523	83,523	83,523	83,523	83,523	83,523	83,523	83,523	83,523	83,523	83,523	83,523
364	Flow Meters	5	-	-	-	-	-	-	-	-	-	-	-	-	-	2,300	2,300	2,300	2,300	2,300	2,300	2,300	2,300	2,300	2,300	2,300	2,300	2,300	2,300	2,300
370	Lift stations	30	40,800	40,800	49,400	69,600	69,600	69,600	69,600	69,600	69,600	69,600	69,600	69,600	69,600	210,500	210,500	210,500	210,500	210,500	210,500	210,500	210,500	210,500	210,500	210,500	210,500	210,500	210,500	210,500
371	Pumping	18	-	-	-	-	-	-	-	-	-	-	-	-	-	63,800	63,800	63,800	63,800	63,800	63,800	63,800	63,800	63,800	63,800	63,800	63,800	63,800	63,800	63,800
374	Reuse Reuse	37	-	-	-	-	-	-	-	-	-	-	-	-	-	5,800	5,800	5,800	5,800	5,800	5,400	5,800	5,300	5,800	5,800	5,800	5,800	5,800	5,800	5,800
380	Treatment	18	-	-	-	-	730,500	730,500	730,500	730,500	730,500	730,500	730,500	730,500	730,500	1,568,000	1,500,000	1,568,000	1,568,000	1,568,000	1,568,000	1,568,000	1,568,000	1,568,000	1,568,000	1,568,000	1,568,000	1,568,000	1,568,000	1,568,000
382	Outfall	30	-	-	-	-	-	-	-	-	-	-	-	-	-	46,800	46,800	46,800	46,800	46,800	46,800	46,800	46,800	46,800	46,800	46,800	46,000	46,800	46,800	46,800
390	Equip	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2,700	2,700	2,700	2,700	2,700	2,700	2,700	2,700	2,700	2,700	2,700
391	Transportation	6	-	-	16,200	16,200	16,200	16,200	16,200	16,200	16,200	16,200	16,200	16,200	16,200	16,200	16,200	16,300	16,200	16,200	16,200	16,200	16,200	16,200	16,200	16,200	16,200	16,200	16,200	16,200
393	Tools	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	600	600	600	600	600	600	600	600	800	600	800
394	Lab	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	300	300	300	300	300	300	300	300	300	300	300
396	Communication	10	-	-	-	-	-	-	-	-	-	-	-	-	-	11,600	11,800	11,800	11,800	11,800	11,000	11,800	11,900	11,800	11,800	11,800	11,800	11,800	11,600	11,600
397	Miscellaneous	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	600	600	600	600	600	600	600	600	600	800	600
	Total Sewer Plant		123,800	123,800	146,000	176,300	1,119,602	1,119,602	1,119,602	1,119,602	1,119,602	1,401,857	1,401,857	1,401,857	1,401,857	2,640,857	2,640,657	2,911,795	2,911,795	2,915,995	2,915,995	2,915,995	2,915,995	2,915,995	2,915,995	2,915,995	2,915,995	2,915,995	2,915,995	2,915,995
	Total Plant		123,800	123,800	148,120	329,420	1,720,386	1,781,386	1,781,386	1,781,386	1,781,386	3,286,992	3,292,792	3,292,792	3,292,792	4,531,792	4,532,372	5,751,129	5,751,129	6,334,079	6,334,079	6,334,079	6,334,079	6,334,079	6,334,079	6,334,079	6,334,079	6,334,079	6,334,079	6,334,079

…epreciation

Depreciation Balances by year

Account	Title	Life	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
303	Land	0																												
304	Structures	33	-	-	-	70	300	348	467	626	785	836	1,115	1,385	1,679	1,888	2,236	2,454	3,172	10,685	28,429	42,172	57,917	73,661	88,405	105,148	120,883	136,637	152,381	168,125
307	Wells	30	-	-	-	-	519	1,369	4,107	6,845	9,583	12,282	20,417	28,552	36,087	44,822	52,987	53,851	63,774	73,887	83,620	93,043	103,466	113,558	123,312	133,335	143,156	153,081	163,004	172,927
310	Power Generation	20	-	-	-	2,208	6,615	11,025	15,435	19,846	24,256	24,719	30,057	35,288	40,733	46,071	51,409	56,747	62,085	67,423	72,761	78,099	83,437	88,775	94,113	99,451	104,786	108,700	108,780	108,780
311	Pumping	20	-	-	-	233	433	1,289	2,163	3,026	3,893	4,847	7,621	10,288	13,168	15,843	18,717	19,583	22,625	25,888	29,451	32,914	36,377	39,840	43,303	46,700	50,229	53,692	57,155	60,618
320	Treatment	22	-	-	-	45	180	330	482	584	728	782	1,800	1,320	1,584	1,848	2,112	2,376	2,800	2,888	3,047	3,408	3,760	4,124	4,483	4,842	5,201	5,559	5,918	6,278
330	Reservoirs	37	-	-	-	800	1,500	2,500	3,500	4,546	5,500	6,002	8,800	10,008	12,011	14,014	16,017	18,020	20,023	22,028	24,029	26,032	28,035	30,038	32,041	34,044	36,047	38,050	40,053	42,056
331	Mains	43	-	-	-	-	4,006	12,017	20,028	28,039	36,050	45,773	73,335	100,987	128,144	155,601	183,058	181,710	236,472	281,234	325,986	370,794	415,520	460,282	505,044	549,806	594,568	639,330	684,092	728,854
333	Services	40	-	-	-	-	291	872	1,463	2,034	2,618	3,051	4,603	5,856	7,407	8,858	10,311	10,012	13,288	15,720	18,174	20,828	23,062	25,538	27,880	30,444	32,898	35,352	37,800	40,280
334	Meters	20	-	-	-	-	911	2,734	4,357	6,380	8,203	9,888	14,123	18,677	22,231	27,795	32,339	33,888	41,803	43,112	53,924	64,538	75,246	85,000	96,672	107,384	118,096	128,800	139,520	150,232
335	Hydrants	45	-	-	-	-	150	477	786	1,113	1,431	1,771	2,770	3,760	4,760	5,767	6,700	4,875	8,391	9,807	11,223	12,839	14,855	15,471	16,887	18,303	19,719	21,135	22,561	23,967
340	Equip	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	48	146	242	1,262	3,399	5,536	7,673	9,810	11,947	12,620	12,820	12,820	12,820	12,820
341	Transportation	6	-	-	677	2,030	3,383	4,736	6,089	7,442	8,120	8,120	8,603	10,823	13,243	13,920	13,820	13,920	13,820	13,920	13,820	13,820	13,820	13,920	13,820	13,820	13,820	13,920	13,820	13,820
343	Tools	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	90	399	448	627	808	985	1,164	1,343	1,522	1,701	1,880
344	Lab	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	38	113	188	283	338	413	488	563	638	713	788
346	Communication	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	80	270	450	630	810	880	1,170	1,350	1,638	1,710	1,800
347	Miscellaneous	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	78	238	287	336	715	874	1,033	1,182	1,351	1,510	1,669
	Total Water A/D		-	-	677	5,104	18,224	37,706	59,078	80,448	101,141	117,761	171,900	227,076	282,852	336,965	389,899	409,901	486,113	587,899	686,763	765,987	864,571	963,475	1,062,379	1,160,019	1,258,796	1,350,188	1,441,615	1,532,994
353	Land	0																												
354	Structures	32	-	-	-	-	-	-	-	-	-	-	-	-	-	1,233	3,699	6,169	8,631	11,097	13,963	16,029	18,496	20,961	23,427	25,893	28,359	30,825	33,291	35,757
360	Force	30	593	1,720	2,847	2,969	4,338	5,700	7,079	8,449	9,819	11,189	12,559	13,929	15,299	15,821	18,234	20,047	23,888	28,473	27,288	30,288	32,712	35,129	37,638	39,951	42,384	44,777	47,180	49,603
361	Gravity	45	-	-	-	-	2,145	6,434	10,723	15,012	19,301	22,105	32,003	41,901	51,700	61,687	71,585	74,229	86,396	104,581	119,727	134,883	150,050	166,225	180,391	185,887	210,723	229,889	241,056	258,221
363	Services	38	-	-	-	-	280	781	1,302	1,823	2,344	2,734	4,035	5,336	6,637	7,936	9,239	9,687	11,800	14,083	16,281	18,479	20,677	22,875	23,073	27,271	29,469	31,667	33,869	36,063
364	Flow Meters	5	-	-	-	-	-	-	-	-	-	-	-	-	-	230	690	1,150	1,610	2,070	2,300	2,300	2,300	2,300	2,300	2,300	2,300	2,300	2,300	2,300
370	Lift stations	30	708	2,059	3,412	3,895	6,215	8,535	10,855	13,175	15,495	17,815	20,135	22,455	24,775	27,122	34,146	41,157	48,174	55,181	63,206	69,223	76,242	83,259	90,276	97,293	104,310	111,327	118,344	125,361
371	Pumping	18	-	-	-	-	-	-	-	-	-	-	-	-	-	1,772	5,316	8,890	12,404	15,848	19,482	23,036	26,500	30,124	33,888	37,212	40,786	44,300	47,844	51,388
374	Reuse Reuse	37	-	-	-	-	-	-	-	-	-	-	-	-	-	78	235	392	549	798	863	1,020	1,177	1,334	1,491	1,648	1,806	1,962	2,119	2,276
380	Treatment	18	-	-	-	-	20,292	60,870	101,456	142,041	182,624	223,207	263,790	304,373	344,955	384,773	456,897	545,219	633,441	721,663	808,685	896,107	988,329	1,074,951	1,162,773	1,300,800	1,339,217	1,427,438	1,515,661	1,589,000
382	Outfall	30	-	-	-	-	-	-	-	-	-	-	-	-	-	762	2,345	3,000	5,471	7,034	8,567	10,160	11,723	13,280	14,849	16,412	17,975	19,538	21,101	22,664
390	Equip	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	225	675	1,125	1,870	2,025	2,478	2,700	2,700	2,700	2,700	2,700
391	Transportation	6	-	-	1,350	4,050	6,750	9,450	12,150	14,850	16,200	16,200	16,200	16,200	16,200	16,200	16,200	16,200	16,200	16,200	16,200	16,200	16,200	16,500	16,200	16,200	16,200	16,200	16,200	16,200
393	Tools	16	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	19	57	95	133	171	209	247	285	323	361	399
394	Lab	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	30	50	70	90	110	130	150	170	190	210
396	Communication	10	-	-	-	-	-	-	-	-	-	-	-	-	-	980	1,740	2,800	4,080	5,220	6,380	7,540	8,700	9,860	11,020	11,600	11,600	11,600	11,600	11,600
397	Miscellaneous	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	60	100	140	180	220	260	300	340	380	420
	Total Sewer A/D		1,299	3,779	7,609	10,914	40,001	91,784	143,567	195,350	245,783	293,250	348,722	404,194	459,466	502,229	620,430	730,814	854,880	978,520	1,104,204	1,229,658	1,353,112	1,477,566	1,602,020	1,725,669	1,848,513	1,971,397	2,094,201	2,201,182
	Total		1,299	3,779	8,286	16,018	58,225	129,490	202,643	275,798	346,924	411,011	520,222	631,270	742,318	838,814	1,010,319	1,140,495	1,342,993	1,547,378	1,770,867	1,994,325	2,217,683	2,441,041	2,664,399	2,885,688	3,105,299	3,321,543	3,535,816	3,734,118