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FILE COPY

Florida Power
CORPORATION

JAMES A. McGEE
SENIOR COUNSEL

March 18, 1996

Ms. Blanca S. Bayó, Director
Division of Records and Reporting
Florida Public Service Commission
2540 Shumard Oak Blvd.
Tallahassee, Florida 32399-0850

960325

Re: Petition to revise tariffs for underground charges by Florida Power Corporation

Dear Ms. Bayó:

Enclosed for filing in the subject docket are fifteen copies of Florida Power Corporation's Petition to revise tariffs for underground charges.

Please acknowledge your receipt of the above filing on the enclosed copy of this letter and return to the undersigned. Also enclosed is a 3.5 inch diskette containing the above-referenced document in WordPerfect format. Thank you for your assistance in this matter.

Very truly yours,

James A. McGee

JAM/jb
Enclosure

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FPSC-RECORDS/REPORTING

GENERAL OFFICE
3201 Thirty-fourth Street South • Post Office Box 14042 • St. Petersburg, Florida 33733-4042 • (813) 866-5184 • Fax: (813) 866-4931
A Florida Progress Company

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Petition to revise tariffs for underground charges by Florida Power Corporation.

Docket No. 960325-EI

Submitted for filing: March 19, 1996

PETITION

Florida Power Corporation (the Company) hereby files this Petition for authority to immediately revise (1) Part XI of the Company's Rules, Underground Residential Distribution Policy, to update the various cost differentials between the installation of overhead and underground facilities for residential service, and (2) Part XII of the Company's Rules, Underground Electric Distribution Facility Charges, to update the Schedule of Binding Cost Estimate Fees, and in support hereof shows as follows:

1. Pursuant to Commission Rule 25-6.078(3), F.A.C., an annual update, based on 1995 costs, has been made of the detailed supporting data used to determine the Company's Estimate Average Cost Differential for new residential distribution and the Company's Binding Cost Estimate Schedule for estimating fees and provisions under which the Company may construct or convert existing overhead facilities (other than new residential subdivisions) to underground facilities, in accordance with Rule 25-6.116, F..A.C. Attached hereto as Exhibit A are revised tariff sheets setting for the updated differential costs and fees for engineering design time to establish a binding cost estimate; attached hereto as Exhibit B are existing tariff sheets indicating changes in legislative format, as required by Rule 25-9.005(3), F.A.C.

2. Attached hereto as Exhibit C are workpapers containing the supporting data and the methodology used to update the cost differential and schedule of fees described above. The data was taken from the books and records of the Company and is subject to continuing Commission audit, thereby facilitating prompt verification of the differentials by Commission staff personnel.

3. The Company asks that the Commission immediately grants its consent to the operation of these revised tariff sheets and charges, or, in the alternative, to allow them to become effective under operation of law in accordance with the provisions of Section 366.06(4), Florida Statutes.

WHEREFORE, the Company requests that the Commission:

1. Determine that the Company is entitled to the relief requested;

2. Permit the revised tariff charges to go into effect immediately or in accordance with the provisions of Section 366.06(4), Florida Statutes; and

3. Grant the Company such other and further relief as is necessary and proper.

Respectfully submitted,

OFFICE OF THE GENERAL COUNSEL
FLORIDA POWER CORPORATION

By _____

James A. McGee
Post Office Box 14042
St. Petersburg, FL 33733-4042
Telephone: (813) 866-5184
Facsimile: (813) 866-4931

EXHIBIT A

FLORIDA POWER CORPORATION

1996 URD FILING

REVISED TARIFF SHEETS

Seventh Revised Sheet No. 4.113
Seventh Revised Sheet No. 4.114
Seventh Revised Sheet No. 4.115
First Revised Sheet No. 4.121

(2) Contribution by Applicant:

(a) Schedule of Charges:

Company standard design underground residential distribution 120/240 volt single-phase service (see also Part 11.03(7)):

To subdivisions with a density of 1.0 or more but less than 6 dwelling units per acre, taking service at each building or mobile home . . . . . $288.00 per point of delivery

To subdivisions with a density of 6 or more dwelling units per acre taking service at each building or mobile home . . . . . $152.00 per point of delivery

To mobile home subdivisions with a density of 6 or more dwelling units per acre taking service at grouped meter pedestals on the serving property line . . . . . $ 31.00 per dwelling unit

To multi-occupancy buildings . . . . . See Part 11.06(2)

(b) The above costs are based upon arrangements that will permit serving the local underground distribution system within the subdivision from overhead feeder mains. If feeder mains within the subdivision are deemed necessary by the Company to provide and/or maintain adequate service and are required by the Applicant or a governmental agency to be installed underground, the Applicant shall pay the Company the average differential cost between such underground feeder mains within the subdivision and equivalent overhead feeder mains as follows:

Three-phase primary main or feeder charge per trench-foot within subdivision:
(U.G. - Underground, O.H. - Overhead)

#2 AWG U.G. vs. #1/0 AWG O.H. . . . . $ 5.12 per foot

#1/0 AWG U.G. vs. #1/0 AWG O.H. . . . . $ 5.85 per foot

500 MCM U.G. vs. 336 MCM O.H. . . . . $15.29 per foot

1000 MCM U.G. vs. 795 MCM O.H. . . . . $15.11 per foot

The above costs assume that underground feeder construction utilizes spare conduit but does not require the use of pad-mounted switchgear. If such switchgear is required, a differential cost for same will be determined by the Company on an individual basis and added to charges determined above.

(c) Credits (not to exceed the "average differential costs" stated above) will be allowed where, by mutual agreement, the Applicant provides trenching and backfilling for the use of the Company's facilities in lieu of a portion of the cash payment described above. These credits, based on the Company's design drawings, are:

Primary and/or Secondary Systems,
for each Foot of Trench . . . . . $ 0.98

Service Laterals,
for each Foot of Trench . . . . . $ 0.98

Florida Power
CORPORATION

(3) **Point of Delivery:** The point of delivery shall be determined by the Company and will be on the side of the building that is nearest the point at which the underground secondary electric supply is available to the property. The point of delivery will only be allowed on the rear of the building by special exception. The Applicant shall pay the estimated full cost of service lateral length required in excess of that which would have been needed to reach the Company's designated point of service.

(4) **Location of Meter and Socket:** The Applicant shall install a meter socket at the point designated by the Company in accordance with the Company's specifications. Every effort shall be made to locate the meter socket in unobstructed areas in order that the meter can be read without going through fences, etc.

(5) **Development of Subdivisions:** The above charges are based on reasonably full use of the land being developed. Where the Company is required to construct underground electric facilities through a section or sections of the subdivision or development where service will not be required for at least two years, the Company may require a deposit from the Applicant before construction is commenced. This deposit, to guarantee performance, will be based on the estimated total cost of such facilities rather than the differential cost. The amount of the deposit, without interest, in excess of any charges for underground service will be returned to the Applicant on a prorata basis at quarterly intervals on the basis of installations to new customers. Any portion of such deposit remaining unrefunded, after five years from the date the Company is first ready to render service from the extension, will be retained by the Company.

(6) **Relocation or Removal of Existing Facilities:** If the Company is required to relocate or remove existing overhead and/or underground distribution facilities in the implementation of these Rules, all costs thereof shall be borne exclusively by the Applicant. These costs shall include the costs of relocation or removal, the in-place value (less salvage) of the facilities so removed, and any additional costs due to existing landscaping, pavement or unusual conditions.

(7) **Other Provisions:** If soil compaction is required by the Applicant at locations where Company trenching is done, an additional charge may be added to the charges set forth in this tariff. The charge will be estimated based on the Applicant's compaction specifications.

11.04 **UNDERGROUND SERVICE LATERALS FROM OVERHEAD ELECTRIC DISTRIBUTION SYSTEMS.**

(1) **New Underground Service Laterals:** When requested by the Applicant, the Company will install underground service laterals from overhead systems to newly constructed residential buildings containing less than five separate dwelling units.

(2) **Contribution by Applicant:**

(a) The Applicant shall pay the Company the following average differential cost between an overhead service and an underground service lateral:

For Service Lateral up to 80 feet $264.00

For each foot over 80 feet up to 200 feet . . . . . $0.88 per foot

Service laterals in excess of 200 feet shall be based on a specific cost estimate.

(b) Credits will be allowed where, by mutual agreement, the Applicant provides trenching and backfilling in accordance with the Company specifications and for the use of the Company facilities, in lieu of a portion of the cash payment described above. These credits, based on the Company's design drawings, are as follows:

For each Foot of Trench . . . . . $ 0.98

The provisions of Paragraphs 11.03(3) and 11.03(4) are also applicable.

ISSUED BY: W. C. Slusser, Jr., Director, Pricing Department

EFFECTIVE:

Florida Power
CORPORATION

11.05 UNDERGROUND SERVICE LATERALS REPLACING EXISTING RESIDENTIAL OVERHEAD SERVICES.

(1) **Applicability:** When requested by the Applicant, the Company will install underground service laterals from existing overhead lines as replacements for existing overhead services to existing residential buildings containing less than five separate dwelling units.

(2) **Rearrangement of Service Entrance:** The Applicant shall be responsible for any necessary rearranging of his existing electric service entrance facilities to accommodate the proposed underground service lateral in accordance with the Company's specifications.

(3) **Trenching:** The Applicant shall also provide, at no cost to the Company, a suitable trench and perform the backfilling and any landscaping, pavement, or other suitable repairs. If the Applicant requests the Company to supply the trench, the charge to the Applicant for this work shall be based on a specific cost estimate.

(4) **Contribution by Applicant:** The charge excluding trenching costs shall be as follows:

For Service Lateral up to 80 feet $249.75

For each foot over 80 feet up to 200 feet . . . . . $0.66 per foot

Service laterals in excess of 200 feet shall be based on a specific cost estimate.

11.06 UNDERGROUND DISTRIBUTION FACILITIES TO MULTIPLE-OCCUPANCY RESIDENTIAL BUILDINGS.

(1) **Availability:** Underground electric distribution facilities may be installed within the tract of land upon which multiple-occupancy residential buildings containing five or more separate dwelling units will be constructed.

(2) **Contribution by Applicant:** There will be no contribution from the Applicant so long as the Company is free to construct the extension in the most economical manner, and reasonably full use is made of the tract of land upon which the multiple-occupancy buildings will be constructed. Other conditions will require special arrangements.

(3) **Responsibility of Applicant:**

(a) Furnish details and specifications of the proposed building or complex of buildings. The Company will use these in the design of the electric distribution facilities required to render service.

(b) Where the Company determines that transformers are to be located inside the building, the Applicant shall provide:

1. The vault or vaults necessary for the transformers and the associated equipment, including the ventilation equipment.

2. The necessary raceways or conduit for the Company's supply cables from the vault or vaults to a suitable point five feet outside the building in accordance with the Company's plans and specifications.

3. Conduits underneath all buildings when required for the Company's supply cables. Such conduits shall extend five feet beyond the edge of the buildings for joining to the Company's facilities.

4. The service entrance conductors and raceways from the Applicant's service equipment to the designated point of delivery within the vault.

ISSUED BY: W. C. Slusser, Jr., Director, Pricing Department

EFFECTIVE:

Florida Power
CORPORATION

12.03 INSTALLATIONS NOT COVERED

The following types of electrical installations are not addressed in these rules:

(a) Distribution lines, new or existing, in urban commercial area, urban residential area, rural residential area, or existing subdivisions will not be considered for undergrounding if the underground conversion area is less than 600 linear feet or where sufficient permits or easements cannot be obtained. The request will not be considered unless all customers on both sides of the road or street who are served by the supply system to be undergrounded are included in the proposed conversion.

(b) Distribution lines in new residential subdivisions. These installations are covered under "Rules of the Florida Public Service Commission", Chapter 25-6, Part V, "Rules for Residential Electric Underground Extensions", and the Company's "General Rules and Regulations Governing Electric Service", Part XI.

(c) Individuals applying for undergrounding of service laterals from existing overhead lines. These applications will be covered by rules referenced in 12.03(b) above.

(d) Electrical distribution circuits serving street or area lighting. Requests for undergrounding circuits of this category will be treated on an individual basis.

12.04 COST ESTIMATE FEES

(1) Non-Binding Cost Estimate Fee

The Company will provide a non-binding cost estimate related to the request at no cost to the Applicant. Such estimate shall not have any guarantee as to its accuracy and shall not be binding upon the Company.

(2) Binding Cost Estimate Fee

The following schedule of fees shall apply to the Applicant for engineering design time to establish a binding cost estimate by the Company for the request. Such fee shall be recognized as a credit in the Facility Charge determination if the Applicant enters into a construction contract within 180 days from date of receipt of the binding cost estimate. At the discretion of the Company, the time from submittal of the cost estimate to entering a contract may be extended beyond 180 days. A major scope change by the Applicant may require a new fee amount.

SCHEDULE OF BINDING COST ESTIMATE FEES

I. NEW CONSTRUCTION (Excluding New Residential Subdivisions)

Facility Classification	Fee
Urban Commercial	$2,975 per mile
Urban Residential	$2,191 per mile
Rural Residential	$1,659 per mile

II. CONVERSIONS

Facility Classification	Fee
Urban Commercial	$4,234 per mile
Urban Residential	$3,476 per mile
Rural Residential	$2,549 per mile
Low Density Subdivision	$15 per lot
High Density Subdivision	$13 per lot

ISSUED BY: W. C. Slusser, Jr., Director, Pricing Department

EFFECTIVE:

EXHIBIT B

FLORIDA POWER CORPORATION

1996 URD FILING

REVISED TARIFF SHEETS - LEGISLATIVE FORMAT

Seventh Revised Sheet No. 4.113
Seventh Revised Sheet No. 4.114
Seventh Revised Sheet No. 4.115
First Revised Sheet No. 4.121

(2) Contribution by Applicant:

(a) Schedule of Charges:

Company standard design underground residential distribution 120/240 volt single-phase service (see also Part 11.03(7)):

To subdivisions with a density of 1.0 or more but less than 6 dwelling units per acre, taking service at each building or mobile home . . . . . ~~$257.00~~ 288.00 per point of delivery

To subdivisions with a density of 6 or more dwelling units per acre taking service at each building or mobile home . . . . . ~~$175.00~~ 152.00 per point of delivery

To mobile home subdivisions with a density of 6 or more dwelling units per acre taking service at grouped meter pedestals on the serving property line . . . . . $ ~~41.00~~ 31.00 per dwelling unit

To multi-occupancy buildings . . . . . See Part 11.06(2)

(b) The above costs are based upon arrangements that will permit serving the local underground distribution system within the subdivision from overhead feeder mains. If feeder mains within the subdivision are deemed necessary by the Company to provide and/or maintain adequate service and are required by the Applicant or a governmental agency to be installed underground, the Applicant shall pay the Company the average differential cost between such underground feeder mains within the subdivision and equivalent overhead feeder mains as follows:

Three-phase primary main or feeder charge per trench-foot within subdivision:
(U.G. - Underground, O.H. - Overhead)

#2 AWG U.G. vs. #1/0 AWG O.H. . . . . $ ~~4.65~~ 5.12 per foot

#1/0 AWG U.G. vs. #1/0 AWG O.H. . . . . $ ~~5.64~~ 5.85 per foot

500 MCM U.G. vs. 336 MCM O.H. . . . . ~~$15.17~~ 15.29 per foot

1000 MCM U.G. vs. 795 MCM O.H. . . . . ~~$14.73~~ 15.11 per foot

The above costs assume that underground feeder construction utilizes spare conduit but does not require the use of pad-mounted switchgear. If such switchgear is required, a differential cost for same will be determined by the Company on an individual basis and added to charges determined above.

(c) Credits (not to exceed the "average differential costs" stated above) will be allowed where, by mutual agreement, the Applicant provides trenching and backfilling for the use of the Company's facilities in lieu of a portion of the cash payment described above. These credits, based on the Company's design drawings, are:

Primary and/or Secondary Systems,
for each Foot of Trench . . . . . $ ~~1.13~~ 0.96

Service Laterals,
for each Foot of Trench . . . . . $ ~~1.13~~ 0.96

ISSUED BY: ~~S. F. Nixon, Jr., Director, Pricing & Utility Partnerships~~
W. C. Slusser, Jr., Director, Pricing Department
EFFECTIVE: ~~April 18, 1995~~

Florida Power
CORPORATION

(3) **Point of Delivery:** The point of delivery shall be determined by the Company and will be on the side of the building that is nearest the point at which the underground secondary electric supply is available to the property. The point of delivery will only be allowed on the rear of the building by special exception. The Applicant shall pay the estimated full cost of service lateral length required in excess of that which would have been needed to reach the Company's designated point of service.

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(2) **Contribution by Applicant:**

(a) The Applicant shall pay the Company the following average differential cost between an overhead service and an underground service lateral:

For Service Lateral up to 80 feet . . . . . ~~$267.00~~ 264.00

For each foot over 80 feet up to 200 feet . . . . . ~~$0.96~~ 0.88 per foot

Service laterals in excess of 200 feet shall be based on a specific cost estimate.

(b) Credits will be allowed where, by mutual agreement, the Applicant provides trenching and backfilling in accordance with the Company specifications and for the use of the Company facilities, in lieu of a portion of the cash payment described above. These credits, based on the Company's design drawings, are as follows:

For each Foot of Trench . . . . . $ ~~1.13~~ 0.98

The provisions of Paragraphs 11.03(3) and 11.03(4) are also applicable.

ISSUED BY: ~~G. F. Nixon, Jr., Director, Pricing & Utility Partnerships~~
W. C. Slusser, Jr., Director, Pricing Department
EFFECTIVE: ~~April 18, 1995~~

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(4) **Contribution by Applicant:** The charge excluding trenching costs shall be as follows:

For Service Lateral up to 80 feet . . . . . ~~$340.46~~ 249.75

For each foot over 80 feet up to 200 feet . . . . . ~~$0.63~~ 0.66 per foot

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Florida Power
CORPORATION

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(b) Distribution lines in new residential subdivisions. These installations are covered under "Rules of the Florida Public Service Commission", Chapter 25-6, Part V, "Rules for Residential Electric Underground Extensions", and the Company's "General Rules and Regulations Governing Electric Service", Part XI.

(c) Individuals applying for undergrounding of service laterals from existing overhead lines. These applications will be covered by rules referenced in 12.03(b) above.

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(1) Non-Binding Cost Estimate Fee

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SCHEDULE OF BINDING COST ESTIMATE FEES

I. NEW CONSTRUCTION (Excluding New Residential Subdivisions)

Facility Classification	Fee	
Urban Commercial	~~$3,585~~ 2,975	per mile
Urban Residential	~~$1,038~~ 2,191	per mile
Rural Residential	~~$1,477~~ 1,659	per mile

II. CONVERSIONS

Facility Classification	Fee	
Urban Commercial	~~$3,693~~ 4,234	per mile
Urban Residential	~~$3,046~~ 3,476	per mile
Rural Residential	~~$2,315~~ 2,569	per mile
Low Density Subdivision	~~$13~~ 15	per lot
High Density Subdivision	~~$13~~ 13	per lot

ISSUED BY: ~~G. F. Dixon, Jr., Director, Rate Department~~
W. C. Slusser, Jr., Director, Pricing Department
EFFECTIVE: ~~MAY 10, 1993~~

EXHIBIT C

FLORIDA POWER CORPORATION

1996 URD FILING

WORKPAPERS

DEVELOPMENT OF REVISED COSTS

CONSISTING OF 28 PAGES

Note: Inquiries concerning development of revised costs should be directed to Mr. Jim Putney at (813) 866-4510.

DISTRIBUTION OPERATIONS AND MAINTENENCE EXPENSES
OVERHEAD AND UNDERGROUND - 1995

ACCOUNT	DESCRIPTION	TOTAL DOLLARS
583.00	Operation - O/H Distribution Lines	$3,294,220
584.00	Operation - U/G Distribution Lines	$2,557,632
593.10	Maintenance - O/H Distribution Lines Lines and Services	$2,572,426
593.20	Maintenance - O/H Distribution Lines Tree Trimming Expense	$8,636,451
594.00	Maintenance - U/G Lines	$1,324,223
595.10	Maintenance - Transformers O/H	$500,917
595.20	Maintenance - Transformers U/G Other	$103,103
595.30	Maintenance - Transformers U/G - URD	$96,354

FLORIDA POWER CORPORATION
CUSTOMER STATISTICS

Year-end O/H Customers Served - 1995	575,925
Year-end U/G Customers Served - 1995	788,919
Year-end Residential O/H Customers	496,922
Year-end Residential U/G Customers	709,085
Joint Trenching Underground Residential Distribution	None

URD REPORT TO THE FLORIDA PUBLIC SERVICE COMMISSION

FLORIDA POWER CORPORATION 02/20/96

LOW DENSITY SUBDIVISION - 210 LOTS

OVERHEAD VS UNDERGROUND

SUMMARY SHEET

COST PER LOT

	OVERHEAD	UNDERGROUND	DIFFERENTIAL
Labor	189	360	171
Material	345	462	117
TOTAL	534	822	288

FLORIDA POWER CORPORATION

LOW DENSITY SUBDIVISION - 210 LOTS

COST PER LOT
OVERHEAD MATERIAL & LABOR

	MATERIAL (1)	LABOR (4)	TOTAL
Service(2)	83.94	45.76	129.70
Primary	20.05	24.32	44.37
Secondary	42.10	13.85	55.95
Initial Tree Trim	0.00	15.92	15.92
Poles	80.81	24.41	105.22
Transformers	92.89	9.17	102.06
Sub-Total(1)	319.79	133.43	453.22
Stores Handling(3)	24.95	0.00	24.95
Sub-Total	344.74	133.43	478.17
Engineering(5)	0.00	55.33	55.33
TOTAL	344.74	188.76	533.50

1-Includes Sales Tax.

2-Includes Meter and Meter Socket.

3-11% of all material except transformer units with a cost of: 72.21
and meters with a cost of: 20.75

4-Includes Administration, General and Transportation.

5-15% of all matl. and labor except transformer units with a cost of: 76.48
and meters with a cost of: 32.81

FLORIDA POWER CORPORATION

LOW DENSITY SUBDIVISION - 210 LOTS

COST PER LOT
UNDERGROUND MATERIAL & LABOR

	MATERIAL (1)	LABOR (4)	TOTAL
Service (2)	78.15	89.74	167.89
Primary	108.11	18.13	126.24
Secondary	128.11	27.03	155.14
Transformers	112.28	9.72	122.00
TRENCHING:			
Prim. & Secondary	0.00	123.86	123.86
			0.00
Sub-Total	426.65	268.48	695.13
Stores Handling(3)	35.08	0.00	35.08
Sub-Total	461.73	268.48	730.21
Engineering(5)	0.00	91.31	91.31
TOTAL	461.73	359.79	821.52

1-Includes Sales Tax.

2-Includes Meter and Meter Socket.

3-11% of all material except transformer units with a cost of: 87.02
and meters with a cost of: 20.75

4-Includes Administration, General and Transportation.

5-15% of all matl. and labor except transformer units with a cost of: 88.64
and meters with a cost of: 32.81

URD REPORT TO THE FLORIDA PUBLIC SERVICE COMMISSION

FLORIDA POWER CORPORATION 2/19/96

MOBILE HOME PARK - INDIVIDUAL SERVICES - 176

OVERHEAD VS UNDERGROUND

SUMMARY SHEET

COST PER LOT

	OVERHEAD	UNDERGROUND	DIFFERENTIAL
Labor	151	261	110
Material	272	314	42
TOTAL	423	575	152

FLORIDA POWER CORPORATION

MOBILE HOME PARK - INDIVIDUAL SERVICES - 176

COST PER LOT
OVERHEAD MATERIAL & LABOR

	MATERIAL	LABOR	TOTAL
Service(2)	80.04	52.29	132.33
Primary	15.72	12.65	28.37
Secondary	31.56	7.86	39.42
Initial Tree Trim	0.00	15.78	15.78
Poles	40.23	11.72	51.95
Transformers	86.15	9.03	95.18
Sub-Total(1)	253.70	109.33	363.03
Stores Handling(3)	18.29	0.00	18.29
Sub-Total	271.99	109.33	381.32
Engineering(5)	0.00	41.68	41.68
TOTAL	271.99	151.01	423.00

1-Includes Sales Tax.
2-Includes Meter and Meter Socket.
3-11% of all material except transformer units with a cost of: 66.69
and meters with a cost of: 20.75
4-Includes Administration, General and Transportation.
5-15% of all matl. and labor except transformer units with a c 70.65
and meters with a cost of: 32.81

FLORIDA POWER CORPORATION

MOBILE HOME PARK - INDIVIDUAL SERVICES - 176

COST PER LOT
UNDERGROUND MATERIAL & LABOR

	MATERIAL	LABOR	TOTAL
Service (2)	73.28	43.31	116.59
Primary	34.72	5.12	39.84
Secondary	72.17	23.13	95.30
Transformers	113.02	10.17	123.19
TRENCHING:			
Prim. & Secondary	0.00	69.57	69.57
Services	0.00	50.37	50.37
Sub-Total	293.19	201.67	494.86
Stores Handling(3)	20.46	0.00	20.46
Sub-Total	313.65	201.67	515.32
Engineering(5)	0.00	59.14	59.14
TOTAL	313.65	260.81	574.46

1-Includes Sales Tax.
2-Includes Meter and Meter Socket.
3-11% of all material except transformer units with a cost of: 86.44
and meters with a cost of: 20.75
4-Includes Administration, General and Transportation.
5-15% of all matl. and labor except transformer units with a c 88.22
and meters with a cost of: 32.81

URD REPORT TO THE FLORIDA PUBLIC SERVICE COMMISSION

FLORIDA POWER CORPORATION **2/19/96**

MOBILE HOME PARK - GANGED METERS - 176 LOT

OVERHEAD VS UNDERGROUND

SUMMARY SHEET

COST PER LOT

	OVERHEAD	UNDERGROUND	DIFFERENTIAL
Labor	110	130	20
Material	230	241	11
TOTAL	340	371	31

FLORIDA POWER CORPORATION

MOBILE HOME PARK - GANGED METERS - 176 LOT

COST PER LOT
OVERHEAD MATERIAL & LABOR

	MATERIAL	LABOR	TOTAL
Service(2)	57.56	25.34	82.90
Primary	15.32	13.06	28.38
Secondary	23.02	6.08	29.10
Initial Tree Trim	0.00	15.18	15.18
Poles	31.62	9.95	41.57
Transformers	88.47	9.75	98.22
Sub-Total(1)	215.99	79.36	295.35
Stores Handling(3)	14.02	0.00	14.02
Sub-Total	230.01	79.36	309.37
Engineering(5)	0.00	30.68	30.68
TOTAL	230.01	110.04	340.05

1-Includes Sales Tax.
2-Includes Meter and Meter Socket.
3-11% of all material except transformer units with a cost of: 67.76
and meters with a cost of: 20.75
4-Includes Administration, General and Transportation.
5-15% of all matl. and labor except transformer units with a c 72.02
and meters with a cost of: 32.81

FLORIDA POWER CORPORATION

MOBILE HOME PARK - GANGED METERS - 176 LOT

COST PER LOT

UNDERGROUND MATERIAL & LABOR

	MATERIAL	LABOR	TOTAL
Service (2)	83.60	36.07	119.67
Primary	31.03	4.80	35.83
Secondary	0.00	0.00	0.00
Transformers	113.02	10.17	123.19
TRENCHING:			
Prim. & Secondary	0.00	46.31	46.31
Services	0.00	0.00	0.00
Sub-Total	227.65	97.35	325.00
Stores Handling(3)	13.25	0.00	13.25
Sub-Total	240.90	97.35	338.25
Engineering(5)	0.00	32.58	32.58
TOTAL	240.90	129.93	370.83

1-Includes Sales Tax.
2-Includes Meter and Meter Socket.
3-11% of all material except transformer units with a cost of: 86.44
and meters with a cost of: 20.75
4-Includes Administration, General and Transportation.
5-15% of all matl. and labor except transformer units with a c 88.22
and meters with a cost of: 32.81

AVERAGE DIFFERENTIAL COST OF INSTALLING FEEDER MAINS UNDERGROUND VS. OVERHEAD

The following pages indicate the method used to determine the average differential costs of installing feeder mains Underground vs. Overhead.

Florida Power Corporation is currently using the Automatic Construction Estimating (ACE) computer program to provide the material and labor costs for all of the assemblies used in overhead and underground construction. A computer study was made to estimate the cost of one mile of overhead feeder line and one mile of underground cable installation. Charges for stores, engineering and supervision were then added to the results of the computer study.

The cost of overhead construction is subtracted from that of underground and then converted to a differential cost per foot.

DIFFERENTIAL COST TO INSTALL FEEDER

Date 3/6/96

Underground vs. Overhead

#2 Al. Underground Cable

	Material	Labor	Total
From Computer Study	$25,885.24	$9,143.09	$35,028.33
Stores 11%	$2,847.38	$0.00	$2,847.38
Subtotal			$37,875.71
Engineering & Supervision 15%			$5,681.36
Total			$43,557.07

1/0 AAAC Overhead Conductor

	Material	Labor	Total
From Computer Study	$8,067.11	$5,397.79	$13,464.90
Stores 11%	$887.38	$0.00	$887.38
Subtotal			$14,352.28
Engineering & Supervision 15%			$2,152.84
Total			$16,505.12

Differential (43,557.07 - 16,505.12) / 5280

$5.12 /ft.

DIFFERENTIAL COST TO INSTALL FEEDER

Date 3/6/96

Underground vs. Overhead

1/0 Al. Underground Cable

	Material	Labor	Total
From Computer Study	$28,905.15	$9,143.09	$38,048.24
Stores 11%	$3,179.57	$0.00	$3,179.57
Subtotal			$41,227.81
Engineering & Supervision 15%			$6,184.00
Total			$47,411.81

1/0 AAAC Overhead Conductor

	Material	Labor	Total
From Computer Study	$8,067.11	$5,397.79	$13,464.90
Stores 11%	$887.38	$0.00	$887.38
Subtotal			$14,352.28
Engineering & Supervision 15%			$2,152.84
Total			$16,505.12

Differential (47,411.81 - 16,505.12) / 5280

$5.85 /ft.

DIFFERENTIAL COST TO INSTALL FEEDER

Date 3/6/96

Underground vs. Overhead

500 MCM Al. Underground Cable

	Material	Labor	Total
From Computer Study	$71,187.53	$11,519.03	$82,706.56
Stores 11%	$7,830.63	$0.00	$7,830.63
Subtotal			$90,537.19
Engineering & Supervision 15%			$13,580.58
Total			$104,117.77

336 MCM AAAC Overhead Conductor

	Material	Labor	Total
From Computer Study	$13,149.63	$5,744.07	$18,893.70
Stores 11%	$1,446.46	$0.00	$1,446.46
Subtotal			$20,340.16
Engineering & Supervision 15%			$3,051.02
Total			$23,391.18

Differential (104,117.77 - 23,391.18) / 5280

$15.29 /ft.

DIFFERENTIAL COST TO INSTALL FEEDER

Date 3/6/96

Underground vs. Overhead

1000 MCM Al. Underground Cable

	Material	Labor	Total
From Computer Study	$82,409.18	$11,519.03	$93,928.21
Stores 11%	$9,065.01	$0.00	$9,065.01
Subtotal			$102,993.22
Engineering & Supervision 15%			$15,448.98
Total			$118,442.20

795 MCM AAAC Overhead Conductor

	Material	Labor	Total
From Computer Study	$24,513.33	$6,419.61	$30,932.94
Stores 11%	$2,696.47	$0.00	$2,696.47
Subtotal			$33,629.41
Engineering & Supervision 15%			$5,044.41
Total			$38,673.82

Differential (118,442.20 -38,673.82) / 5280

$15.11 /ft.

UNDERGROUND SERVICE LATERALS FROM OVERHEAD ELECTRIC DISTRIBUTION SYSTEMS

To estimate the cost of an overhead to underground service, the costs from a computer study are shown on the following pages.

The study has been arranged to provide a breakdown of the fixed cost of a service of 80 feet or less and the cost of a service in excess of 80 feet. Stores, engineering, and supervision costs are then added.

UNDERGROUND SERVICE LATERALS FROM OVERHEAD ELECTRIC DISTRIBUTION SYSTEMS

Date 3/6/96

Underground Fixed Costs:	Material	Labor	Total
From Computer Study	$139.25	$160.77	$300.02
Stores 11%	$15.32		$15.32
Engineering 2 hrs. @ $32.88		$65.76	$65.76
Total			$381.10

Underground Excess Costs:	Material	Labor	Total
From Computer Study	$123.27	$146.65	$269.92
Stores 11%	$13.56		$13.56
Total (for 120 ft)			$283.48

Overhead Fixed Costs:	Material	Labor	Total
From Computer Study	$36.46	$43.26	$79.72
Stores 11%	$4.01		$4.01
Engineering 1 hrs. @ $32.88		$32.88	$32.88
Total			$116.61

Overhead Excess Costs:	Material	Labor	Total
From Computer Study	$115.28	$50.09	$165.37
Stores 11%	$12.68		$12.68
Total (for 120 ft)			$178.05

DIFFERENTIAL

Fixed Underground	$381.00		
Fixed Overhead	- $117.00		
Difference	$264.00		
Excess Underground	$283.48		
Excess Overhead	- $178.05	Cost per foot:	
Difference	$105.43	= $105.43/120	= $0.88

UNDERGROUND SERVICE LATERALS REPLACING EXISTING RESIDENTIAL OVERHEAD SERVICES

The cost of conversion from overhead to underground service is similar to the cost of the overhead to underground installation previously calculated. The depreciated cost of the overhead service, the removal cost of the service, and the salvage value of the overhead service are all taken into consideration. The calculation is based on the fact that the customer will provide the trenching.

CALCULATION OF CONVERSION OF OVERHEAD TO UNDERGROUND SERVICE

FIXED COST OF OVERHEAD SERVICE - $116.61 (CALCULATED PREVIOUSLY)

COST OF OVERHEAD METER SOCKET - $20.86 (FROM COMPUTER STUDY)

THE AVERAGE AGE OF AN OVERHEAD SERVICE WAS DETERMINED TO BE 12.53 YEARS BY PLANT ACCOUNTING.

THE LATEST AVAILABLE HANDY - WHITMAN INDEX BULLETIN WAS USED TO DETERMINE THE ORIGINAL COST OF A NEW SERVICE 12.53 YEARS PREVIOUSLY THE INDEX NUMBERS AND CALCULATIONS ARE AS FOLLOWS:

	7/1/95	1/1/83
LINE 50 - SERVICES	273	202
LINE 52 - METERS	181	203

OVERHEAD SERVICE COST 12.53 YEARS AGO =
$116.61(202/273) + $20.86(203/181) =
$86.28 + $23.40 = 109.68

THE DEPRECIATED COST OF ORIGINAL SERVICE WAS DETERMINED UTILIZING THE DISTRIBUTION DEPRECIATION RATES FOR ELECTRIC PLANT.

	AVERAGE SERVICE LIFE IN YEARS
SERVICES	34
METERS	28

DEPRECIATED FIXED COST OF OVERHEAD SERVICE =
$86.28(21.47/34) + $23.40(15.47/28) =
$54.48 + $12.93 = 67.41

LIKEWISE, THE DEPRECIATED VARIABLE COST IS DETERMINED (FOR 120 FT):

OVERHEAD EXCESS COST (CALCULATED PREVIOUSLY) - $178.05

ORIGINAL COST - $178.05(202/273) = 131.74

DEPRECIATED EXCESS COST - $131.74(21.47/34) = 83.19

THE SALVAGE VALUE OF THE EXISTING SERVICE WAS DETERMINED USING THE CURRENT PRICE FOR SCRAP ALUMINUM. AS OF 1/2/96, THE SALVAGE VALUE IS $.7598/LB. THE WEIGHT OF 2/3 ALUMINUM SERVICE IS .228 LB/FT.

SALVAGE VALUE =
(.228 LBS./FT.)($.7598/LB.) = $0.17/FT

UNDERGROUND SERVICE LATERALS REPLACING EXISTING RESIDENTIAL OVERHEAD SERVICES

Date 3/6/96

Fixed Cost	
Overhead to Underground Service Differential (Calculated Previously)	$264.00
Removal Cost of Overhead Service (From Computer Study)	$10.34
Less Trenching	($78.40)
Depreciated Cost of Overhead Service	$67.41
Salvage of Overhead Service	($13.60)
Total	$249.75
Variable Cost (Based on 120 ft)	
Overhead to Underground Service Differential (Calculated Previously)	$105.43
Less Trenching (From Computer Study)	($117.60)
Removal of Overhead Service (From Computer Study)	$28.62
Depreciated Cost of Overhead Service	$83.19
Salvage of Overhead Service	($20.40)
Total	$79.24

Cost per foot = $79.24/120 = $0.66

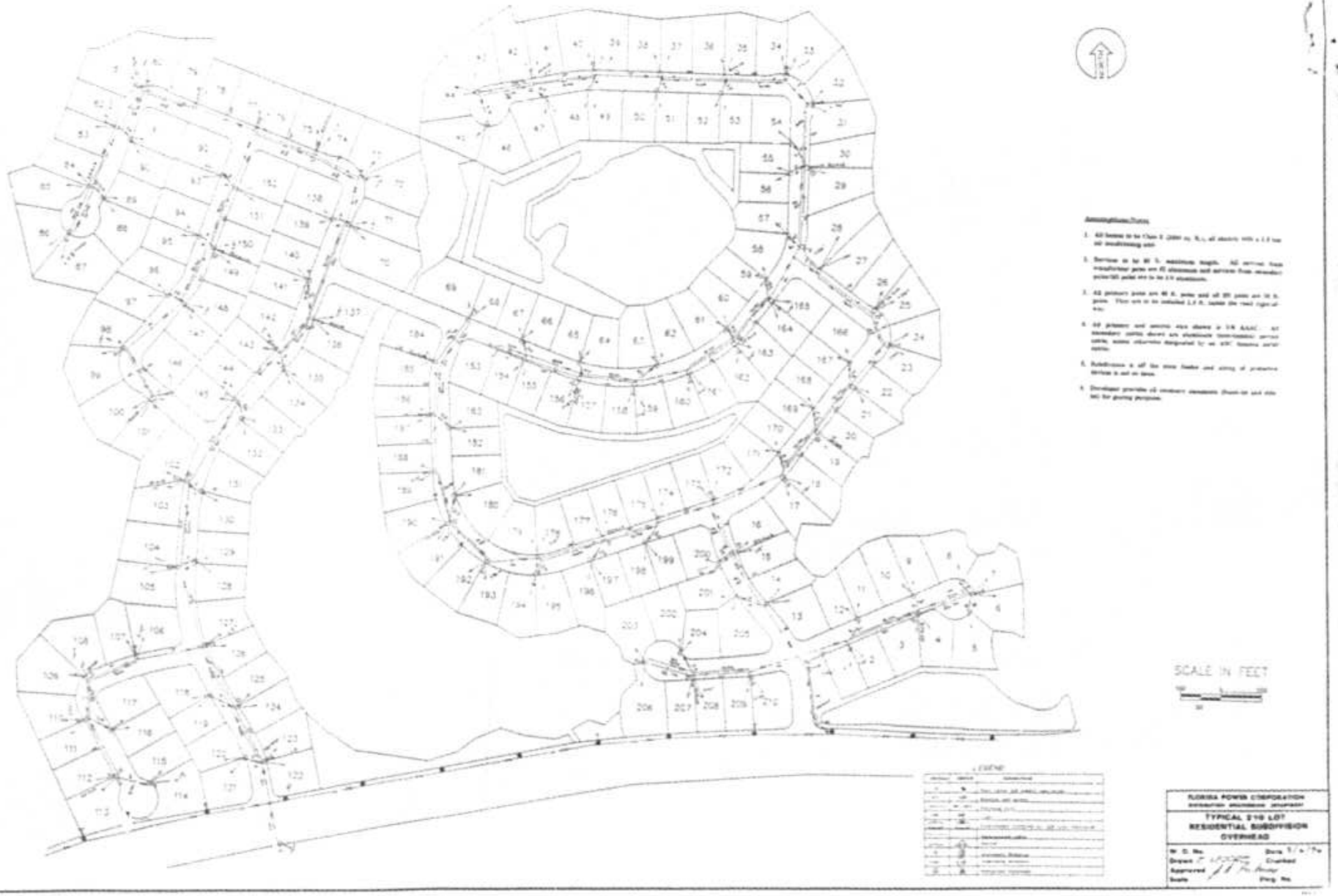
COST OF PROVIDING A BINDING ESTIMATE

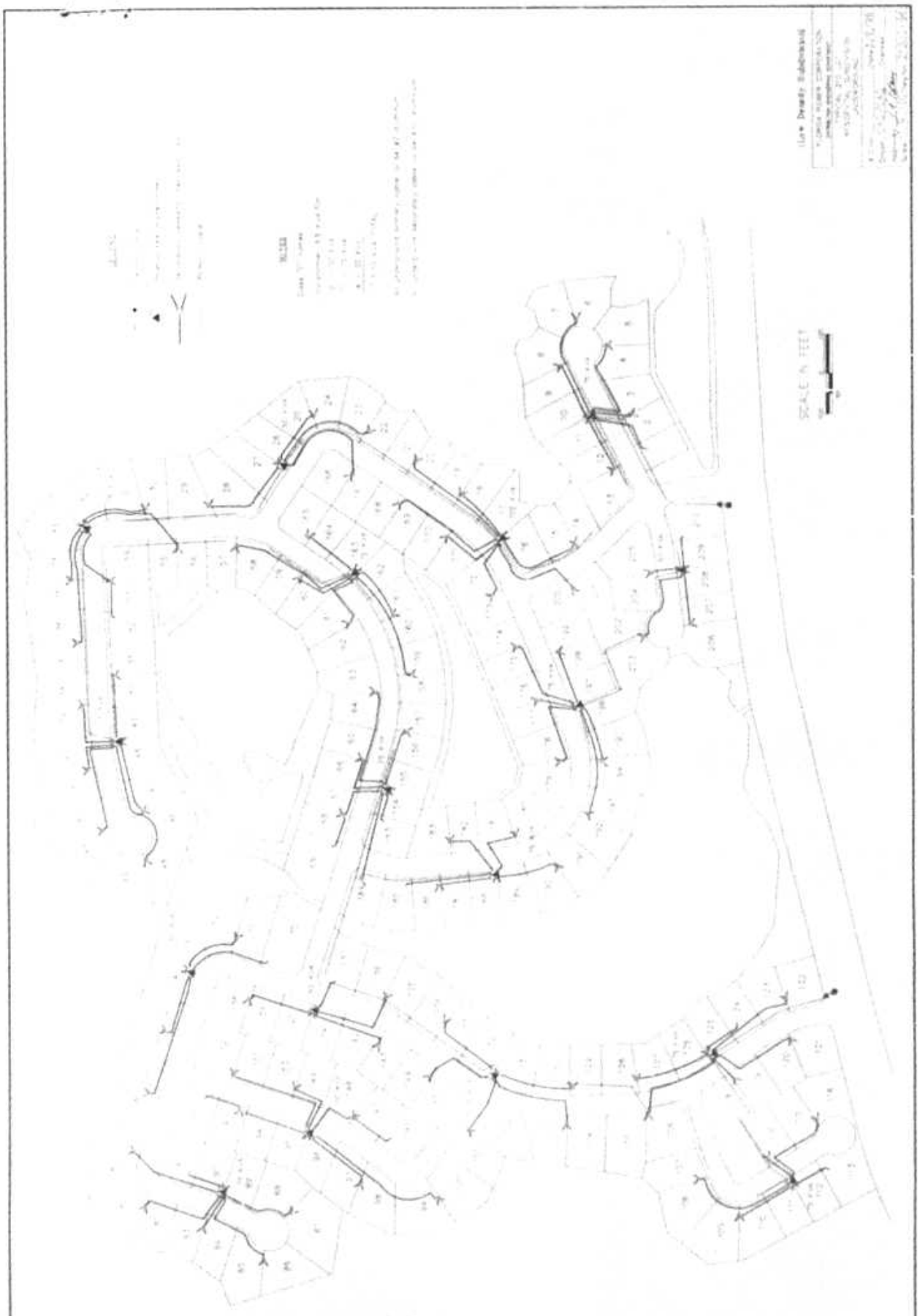
A calculation is made for charging an Applicant for the engineering design time to establish a binding cost estimate by the company under Section 12.04 of the URD tarriff.

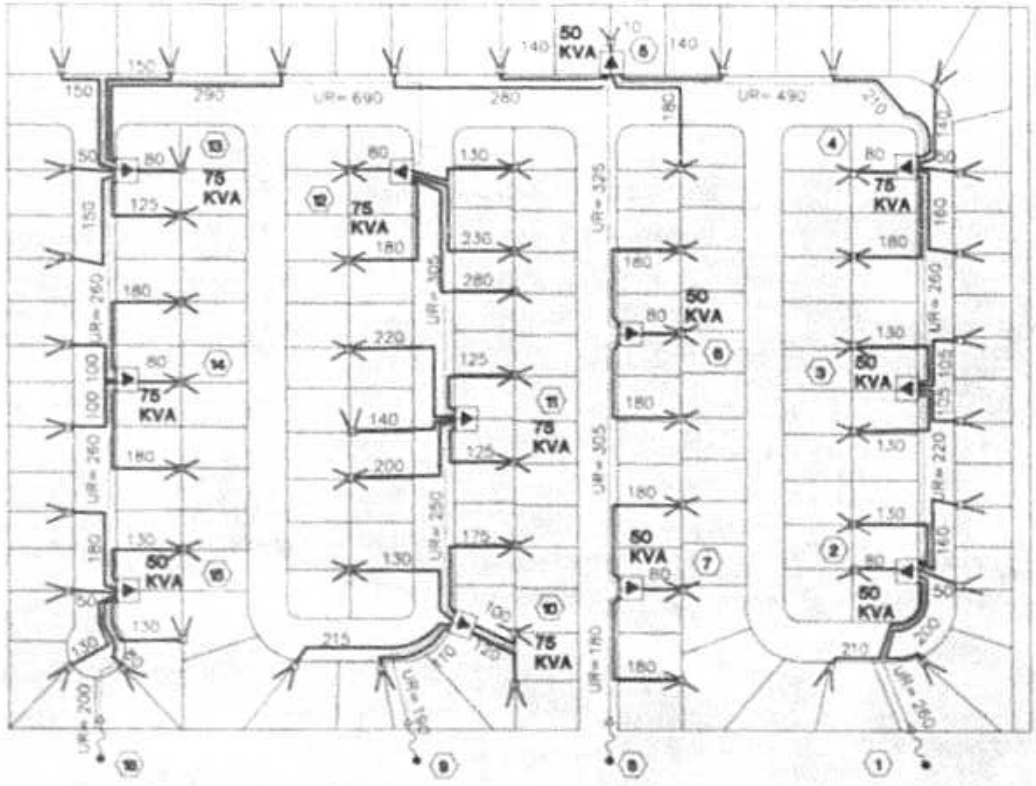
The average cost of engineering personnel engaged in this type of work is determined. The average cost per hour is then multiplied by the estimated time to do each type of estimate.

Average manhours for Engineers

MANHOURS					
New Construction of Underground		Average Manhours/ mile	Cost/ Hr	Cost Estimate Fees	
Urban Commercial		86.92	$34.23	$2,975	per mile
Urban Residential		64.00	$34.23	$2,191	per mile
Rural Residential		48.46	$34.23	$1,659	per mile
Conversion of Overhead to Underground					
Urban Commercial		123.69	$34.23	$4,234	per mile
Urban Residential		101.54	$34.23	$3,476	per mile
Rural Residential		74.46	$34.23	$2,549	per mile
Low Density Subdivision		93.50	$34.23	$15	per lot
High Density Subdivision		68.10	$34.23	$13	per lot


SCALE IN FEET
FLORIDA POWER CORPORATION
TYPICAL 210 LOT
RESIDENTIAL SUBDIVISION
OVERHEAD





NOTES:

Class "S" mobile homes

Transformer, 4.6 KVA/lot

6 - 50 KVA

6 - 75 KVA

12 - 750 KVA TOTAL

4,195' All primary cable #2 AL

280' Secondary cable to FPC pedestal 4/0 AL

8,435' Secondary cable to FPC pedestal 1/0 AL

61 FPC Secondary pedestals

Spare conduit installed for secondary and service use.

LEGEND

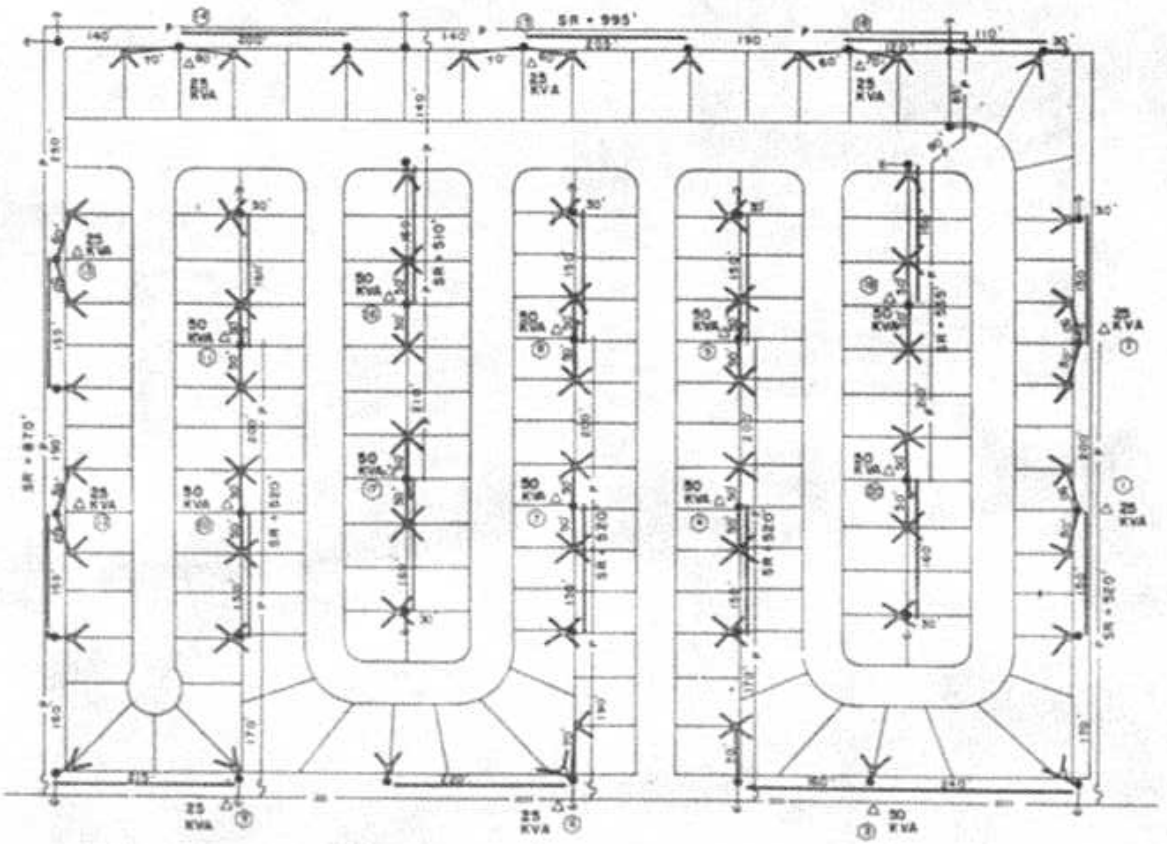
- Terminal pole
- Padmounted transformer
- Secondary/pedestal/two services
- Primary cable
- URD — Unit Run (horizontal length of primary circuit)
- (1) — Location number

(High Density Subdivision)

FLORIDA POWER CORPORATION
DISTRIBUTION ENGINEERING DEPARTMENT

Typical Mobile Home
Subdivision 178 Lots
UNDERGROUND - INDIVIDUAL

W.O. NO. _____ DATE 7/6/90
DRAWN CAROLINA CHECKED [signature]
APPROVED _____
SCALE 1"=100' DWG. NO. 178U-90



NOTES

Class "3" mobile homes

Transformers: 6.7 KVA/lot

8 – 25 KVA

11 – 50 KVA

19 775 KVA TOTAL

3,340' #2 primary wire 1/0 AL

3,992' #2 secondary cable 4/0 AL

1,040' #2 service cable no 2 (ganged meter pedestals) 1/0 AL

1,595' #2 service cable to 4 (ganged meter pedestals) 4/0 AL

LEGEND

SR = Primary segment run from point to point

Fuse pull off

Transformer station

Primary wire

Secondary/service/meter/nen Customer Service

Anchor

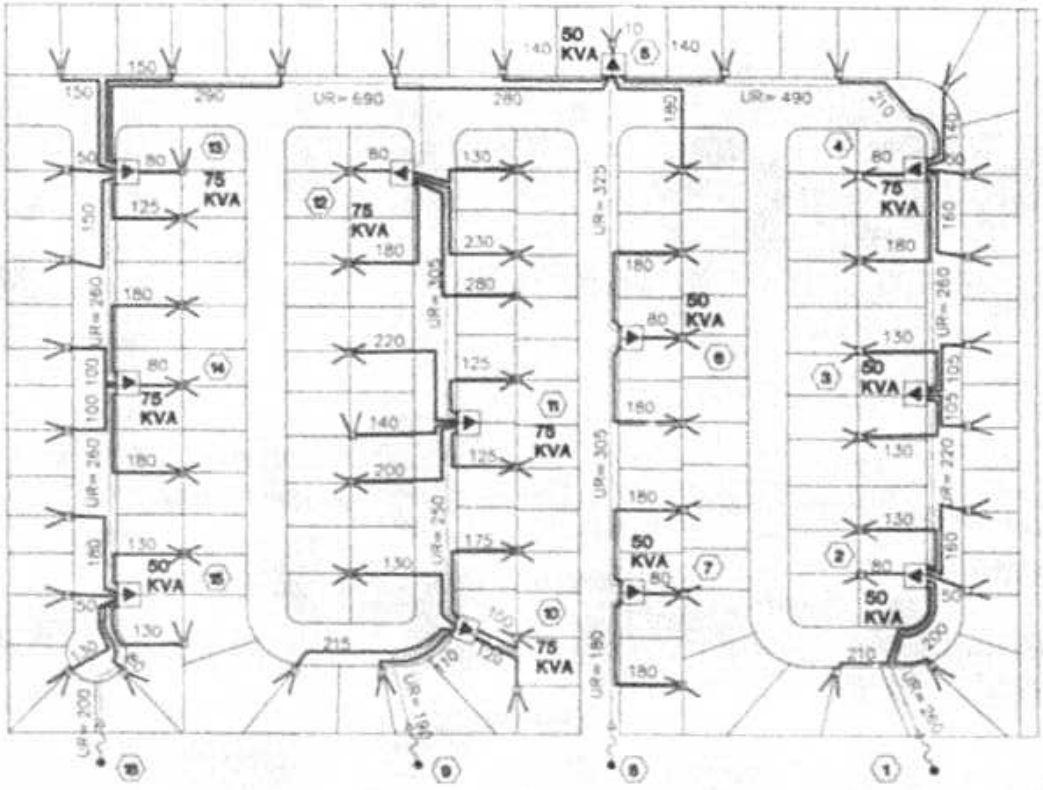
(HIGH DENSITY SUBDIVISION)

FLORIDA POWER CORPORATION
DISTRIBUTION ENGINEERING DEPARTMENT

TYPICAL MOBILE HOME
SUBDIVISION 176 LOTS
OVERHEAD GANGED

W O No. _____ Date 8/6/
Drawn C A S Checked
Approved
Scale 1" = 100' Dwg. No.

FLORIDA POWER CORPORATION
URD WORKPAPERS
PAGE 27 OF 28



NOTES:

Class "3" mobile homes

Transformer, 4.8 KVA/lot

6 - 50 KVA

6 - 75 KVA

12 - 750 KVA TOTAL

4,195' #2 primary cable AL

280' Secondary cable to customer owned pedestal 4/0 AL

8,435' Secondary cable to customer owned pedestal 1/0 AL

61 Customer owned meter pedestals

Spare conduit installed for service use.

LEGEND

- Terminal pole
- Pedmounted transformer
- Secondary/pedestal/two services
- Primary cable
- UR — Unit Run (Horizontal length of primary circuit)
- (1) — Location number

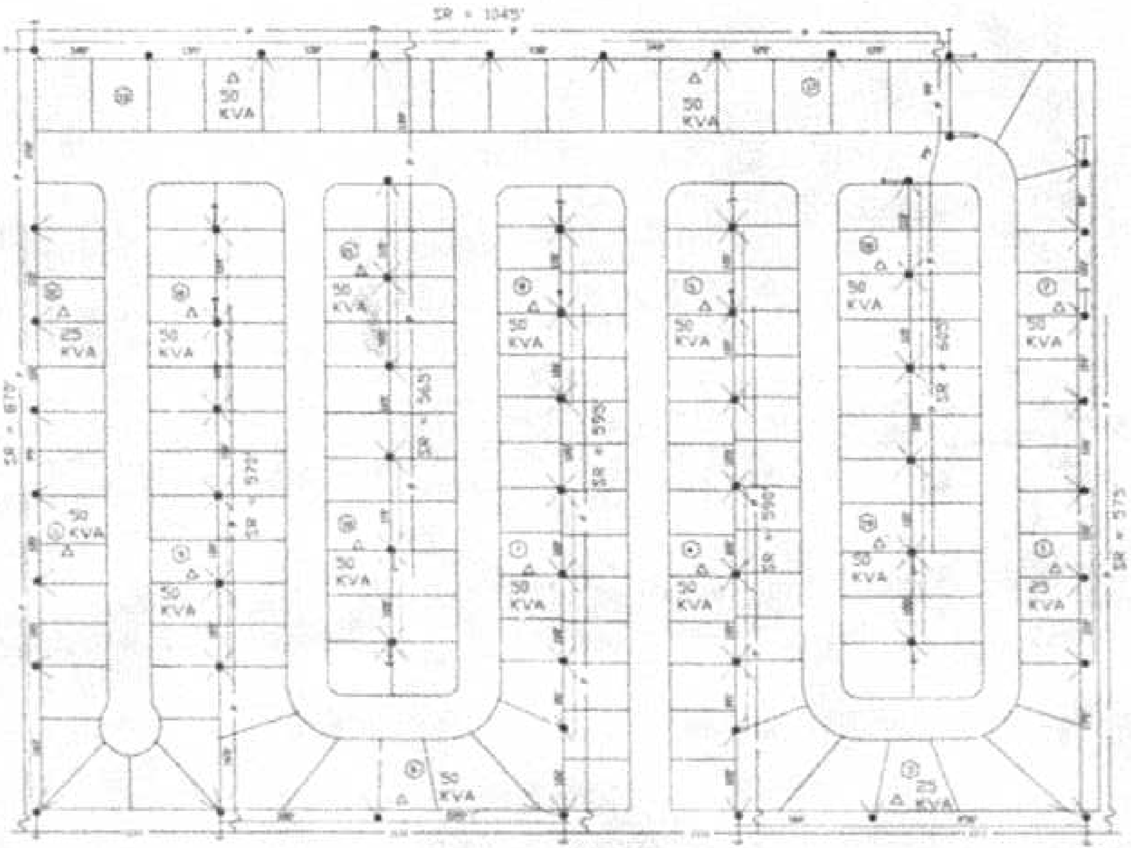
Customer owned meter pedestals and service

(High Density Subdivision)

FLORIDA POWER CORPORATION
DISTRIBUTION ENGINEERING DEPARTMENT

Typical Mobile Home
Subdivision 178 Lots
UNDERGROUND - GANGED METERS

DRAWN CAD/CAE DATE 3/28/90
APPROVED
SCALE 1"=100' SHT. NO. 1 REV. NO.



NOTES

CLASS "3" MOBILE HOMES
TRANSFORMER 5.8 KVA/LOT

3 - 25 KVA
15 - 50 KVA
18 - 800 KVA TOTAL

8,085' ALL PRIMARY CABLE 1/0 AL
5,380' ALL SECONDARY CABLE 4/0AL
9,870' ALL SERVICES 1/0 AL

1. ALL PRIMARY DISTRIBUTION POLES ARE 35'
2. ALL SECONDARY POLES ARE 30'

LEGEND

SR = PRIMARY SEGMENT RUN FROM POINT TO POINT
FUSE PULL OFF
TRANSFORMER STATION
—P— PRIMARY WIRE
SECONDARY/2 FPC SERVICES
ANCHOR
LOCATION NUMBER

(HIGH DENSITY SUBDIVISION)

FLORIDA POWER CORPORATION
DISTRIBUTION ENGINEERING DEPARTMENT

Typical Mobile Home Subdivision 178 Lots OVERHEAD INDIVIDUAL

DRAWN CAD/CAS
SCALE 1"=100'