

ORLANDO UTILITIES COMMISSION



CALENDAR 2016 STORM HARDENING REPORT

**PURSUANT TO FLORIDA PUBLIC SERVICE
COMMISSION RULE 25-6.0343**

Orlando Utilities Commission Florida Public Service Commission Pursuant to Rule 25-6.0343, F.A.C. Calendar Year 2016

1) Introduction

City of Orlando, Orlando Utilities Commission

100 West Anderson , Orlando FL 32801

Contact information:

Clint Bullock, Vice-President, Electric Delivery Business Unit
407-434-4186, cbullock@ouc.com

Troy Morris, Director, Distribution Construction & Maintenance
407-434-4199, tmorris@ouc.com

2) Number of meters served in calendar year 2016

Orlando Utilities Commission served 234,723 electric meters in the Cities of Orlando and St. Cloud and surrounding Orange and Osceola counties as of December 31, 2016.

3) Standards of Construction

a) National Electric Safety Code Compliance

The Orlando Utilities Commission (OUC) complies with the construction standards, policies, guidelines, practices, and procedures directed within the National Electrical Safety Code (ANSI C-2) [NESC]. For electrical facilities constructed on or after February 1, 2007, the 2007 NESC applies. The edition of the NESC in effect at the time of the facility's initial construction governs electrical facilities constructed prior to February 1, 2007.

b) Extreme Wind Loading Standards

Construction standards, policies, guidelines, practices, and procedures at the Orlando Utilities Commission are guided by the extreme wind loading standards specified by Figure 250-2(d) of the 2002 edition of the NESC for 1) new construction; 2) major

planned work, including expansion, rebuild, or relocation of existing facilities, assigned on or after December 10, 2006; and 3) targeted critical infrastructure facilities and major thoroughfares.

OUC has verified that all future construction will meet the NESC requirements with particular focus on the extreme wind loading standards.

c) Flooding and Storm Surges

The Orlando Utilities Commission service area is in the middle of Florida. Therefore, flooding and storm surges do not apply.

d) Safe and Efficient Access of New and Replacement Distribution Facilities

Electrical construction standards, policies, guidelines, practices, and procedures at OUC provide for placement of new and replacement distribution facilities so as to facilitate safe and efficient access for installation and maintenance.

Since the 1980's, Orlando Utilities has been installing underground and overhead distribution along property frontage corridors. This gives efficient and safer access to these facilities. OUC provides vegetation maintenance and replacement of aged equipment to ensure an efficient, safe, & robust system for all OUC facilities including existing rear lot installations.

e) Attachments by Others

Electrical construction standards, policies, guidelines, practices, and procedures at the Orlando Utilities Commission include contractual agreement to enable attachment by others. These contracts state that attachments must adhere to the guidelines of the NESC and all governmental authorities that have jurisdiction.

4. Facility Inspections

a) Policies, guidelines, practices, and procedures for inspecting transmission and distribution lines, poles, and structures.

Summary

Orlando Utilities Commission (OUC) has maintained an active pole inspection and replacement program with records dating back to 1990. We currently uphold an eight-year quadrant based inspection cycle along with annual inspections targeting essential distribution and transmission equipment. Shared transmission structures are inspected and maintained by OUC based on past inspection date.

Distribution and Transmission pole inspection replacements are tracked through an existing maintenance work order database to insure timely replacement.

Inspection Procedures

Visual inspection shall be made of all poles from the ground line to the top before any other inspection. Visual inspection shall include: type of wood, original treatment, circumference, age of pole, (if it can be determined), height, obvious splits, woodpecker holes, and any other physical damages to the pole. Also a visual check within the limitations of the inspector's expertise, is to be made at such time of the attachments to the pole being inspected for obvious conditions that appear improper, such as slack guy wires, slack overhead conductors, broken insulators, leaking transformers, missing guy guards, rotten cross arms, loose or faulty equipment, abandoned poles, etc.

Excavation

Earth shall be removed from the entire circumference of the pole to a minimum depth of 18 inches below ground line. Width of the hole shall be 4 inches clearance for the pole surface at the bottom and 10 inches at the ground line.

Poles with electric risers should not be excavated, but should be inspected by sounding, boring and fumigating.

Sounding and Boring

The pole must be sounded from the ground line to a minimum of six feet above the ground line. Sounding shall be done on all four sides of the pole to locate any shell rot or rot pockets on the side.

Sounding shall be done with an approved hammer that leaves a distinctive hammer pattern. If there is evidence of possible interior voids or rot, at least one boring shall be made where a void is indicated. If rot or voids are detected, several borings shall be made per rot or void location and a shell gauge shall be used to determine the extent of all voids or rot. In any event at least two borings shall be made at the ground line to check for rot.

Poles set in concrete or pavement shall be bored at least twice at opposite sides at the ground line down at a 45-degree angle into the pole and the boring sample checked for rot or voids.

Removal of Exterior Decay

All exterior decay must be removed where possible, from 18 inches below the ground line to 3 inches above ground line. The rotted wood is to be removed from the premises and disposed of in a proper manner.

Evaluation of Pole Condition

After the sounding and boring has been performed and all exterior decay has been removed, the effective circumference of the pole, from 18 inches below the ground line to 15 inches above the ground line, is to be determined.

Internal Treatment

All sound poles are internally treated if any specific voids of specific internal decay pockets are found. This should involve a sufficient number of bored 3/8 inch holes and the preservative is applied under at least 50 psi of pressure. Internal pole treatment also utilizes MITC-Fume or and OUC approved fumigant.

Ground Line Treatment

All poles not previously rejected are covered from 18 inches below the ground line to 3 inches above the ground line by an OUC approved preservative and moisture barrier film. Preservative treatment penetrates a minimum of two inches into the pole. Long-term treatment retention studies are kept to assure future review and results.

b) Number and percentage of transmission and distribution inspections planned and completed for 2016.

Distribution and Transmission Planned Inspections					
Year	Total System Poles	Planned Inspection	Planned Percentage of System	Inspection Completed	Completed Percentage of System
2016	50049	6400	12%	6419	13%
2015	50915	6400	12%	6758	13%
2014	50582	6400	12%	6410	13%
2013	50721	6400	12%	6415	13%
2012	50804	6400	12%	6400	12%
2011	50938	6400	12%	6730	13%
2010	51142	6400	12%	6534	13%
2009	51435	6400	12%	6411	12%
2008	51114	6400	12%	6124	12%
2007	50536	6400	12.5%	8124	16%

c) Number and percentage of transmission and distribution poles / structures failing inspection and the reason for the failure.

Poles Failing Inspection		
	Percentage of Inspection Failure	Total Inspected Poles Failing Inspection
2016	0.9%	58
2015	1.3%	97
2014	2.3%	145
2013	5.5%	352
2012	6.2%	396
2011	8.9 %	600
2010	9.8 %	642
2009	4.4%	280
2008	3.0 %	189

A detailed report with pole failure causes is attached.

Attachment 1: (OUC 2016 Pole Report.xls)

d) Number and percentage of transmission poles, structures and distribution poles, by pole type and class of structure, replaced or for which remediation was taken after inspection, including a description of the remediation taken.

Poles needing Remediation					
Year	Total Inspection Poles Failing Inspection	Priority Replacement (Complete)	Restoration (Complete) C-Truss	Work Orders Generated for Replacement	Work Orders Completed
2016	58	3	7	61	3
2015	97	15	9	73	8
2014	145	2	3	140	479
2013	352	5	56	296	282
2012	396	8	10	386	456
2011	600	2	66	532	267
2010	642	7	121	514	435
2009	280	4	66	210	208
2008	189	9	82	98	98
2007	226	1	81	144	144
2006	208	10	146	52	52

A total of (58) fifty eight poles failed inspection criteria, (3) three poles deemed priority replacement, (3) three are completed. There are (7) seven poles which restoration was deemed necessary using a reinforcing truss, which will be completed in the first quarter of 2017. The remaining (55) fifty five poles are in progress of being generated for replacement in 2017 and 2018.

A detailed report denoting the type and class structure is attached.

Attachment 1: (OUC 2016 Pole Report.xls)

5. Vegetation Management

- a) Utility's policies, guidelines, practices, and procedures for vegetation management, including programs addressing appropriate planting, landscaping, and problem tree removal practices for vegetation management outside of road right-of-ways or easements, and an explanation as to why the utility believes its vegetation management practices are sufficient.*

Maintenance Guidelines and Procedures

The Orlando Utilities Commission (OUC) provides essential electrical service closely tied to our communities' safety, economy and welfare. In delivering reliable electrical service OUC manages the vegetation for approximately 1261 miles of overhead distribution lines and 200 miles of transmission lines within Orange and Osceola Counties. Vegetation line clearance of distribution facilities are trimmed on a three year maintenance cycle. Transmission right of ways' are maintained in two sub-divided regions, urban right of way on an annual cycle, and rural on a three year cycle. Measures to insure our vegetation program is sufficient and remains on schedule, comprise of annual inspections of the distribution and transmission system.

OUC follows pruning and safety methods outlined in American National Standards Institute A300 and Z133.1. A three-year maintenance cycle of distribution facilities anticipates an average annual growth of 2.5 feet. Trees in close proximity of distribution facilities are trimmed to a minimum distance of 10 feet clearance from energized un-insulated conductors. Fast growing invasive species are targeted for removal during distribution pruning. This proactive measure relieves future trimming requirements and insures clearances within the cycle will be maintained.

The distribution three year cycle is divided into 198 distribution segments reviewed on a quarterly basis. The review is used to make adjustments to crew resources to remain on cycle. OUC currently procures vegetation maintenance labor and equipment through a contract with Davey Tree Experts. The contract comprises twelve to twenty production line trimming crews used in distribution and transmission line clearance.

Vegetation pruning requests are tracked using an internal CIS system available in the distribution operations, customer service, construction and maintenance area. Requests generated from a system outage are either trimmed immediately or given a work order priority for completion. The general foreman provides additional feedback if additional area trimming is needed.

Appropriate Planting

OUC outlines appropriate planting through educational information presented by the Central Florida Urban Forestry Council. The council presents a theme "Right Tree in the Right Place" to insure proper distance between trees and power lines. By practicing proper planting our goals to insure safety, reliability and lowered maintenance costs become factors which all of our customers benefit.

Vegetation located outside of the right of way is pruned to a distance 10' from energized conductors. The "Right Tree Right Place" concept is reviewed in cases where removals may become prudent. OUC annually sponsors tree planting events during Arbor Day to promote proper planting.

Measures to insure Sufficient Vegetation Management

OUC has applied a Reliability Centered Maintenance (RCM) approach from NFPA 70B to assure our vegetation management practices area sufficient. An annual inspection of all main feeder distribution lines is conducted to survey acceptable clearances in distribution system throughout the three-year treatment plan. The RCM inspections document vegetation to conductor distances with less than one year's anticipated growth (2.5'). Vegetation work orders are generated and completed during seasonal non-peak time frame to insure electrical system is fully prepared for the Florida summer storm season.

Two measures are used to verify sufficient vegetation management in our maintenance cycle.

- a. The documented number of RCM clearances are compared against the trim cycle order. (A circuit about to be trimmed is expected to have more areas of clearance.)
- b. Outage management system (OMS) indices relating to sustained and momentary outages are also compared to the trim cycle order.

Example: Sufficient Vegetation Management

Reliability Centered Maintenance Inspections (RCM)

a.

b.

Distribution Vegetation Management Schedule **OUC**
The Reliable One

Four Year Treatment Cycle Last revised (2/21/2011)

Line Segment	Circuit Number	Work Scheduled	Budgeted Costs Based from GIS Mileage				Actual Costs - Field Mileage				Budget Variance	Circuit Reliability Information			
			Truck + Non-Truck Miles	Non-Truck Miles	Non-Billable Miles	Budget Production Cost	Total Actual Miles	Actual Non-Truck Miles	Actual Production Cost	2009 RCM Circuit Clearance Inspection		Reliability 2007	2007 RCM Circuit Clearance Inspection		
GIS 129107		Initiated Date: Completion Date:													
			Cycle Treatment Year 1				Fiscal Year 2010, previous treatment Year 2006								
First Quarter - October / December															
1	S-14	July-09 / October-09	0.47	2.07	7.40		\$33,865.04	0.21	1.98	7.22	\$32,680.35	-\$1,014.69			
2	10-15	August-09 / August-09	3.55	0.04	2.11	1.15	\$11,928.58	3.50	0.59	2.57	\$12,559.00	\$1,669.62			
3	14-21	Non-Billable / Non-Billable	0.00			0.34	\$2.00	0.00	0.00	0.00	\$0.00				
4	1-22	July-09 / November-09	5.50	0.20	5.40		\$18,282.40	5.50	0.22	0.23	\$18,028.46	-\$223.94			
5	14-41	Non-Billable / Non-Billable	0.00			0.53	\$0.00	0.00	0.00	0.00	\$0.00				
6	3-23	August-09 / September-09	2.81	1.47	1.34	1.86	\$13,225.04	2.83	1.53	1.12	\$12,841.92	-\$383.72			
7	12-12	July-09 / August-09	5.72	1.72	4.00	0.82	\$22,211.84	5.30	1.49	3.84	\$20,078.25	-\$2,133.59			
8	28-213	September-09 / December-09	45.58	11.48	33.90	0.26	\$157,223.06	43.58	13.80	28.78	\$182,373.13	\$4,850.07			
9	10-11	August-09 / December-09	7.83	0.85	7.27		\$24,469.42	7.35	1.04	0.91	\$25,879.44	\$1,470.02			
10	1-33	July-09 / November-09	0.90	0.05	0.65	0.58	\$1,287.10	0.56	0.02	0.47	\$1,840.19	\$483.09			

b) Quantity, level, and scope of vegetation management planned and completed for transmission and distribution facilities.


Vegetation Management Annual Plan

The 2016 annual budget for Distribution and Transmission Vegetation management was approximately three million dollars and will remain consistent for 2017. OUC plans to continue with treatment of 321 miles of distribution line clearance and 107 miles of transmission ROW to remain on established cycles. Treatment of distribution line clearance will consist of bucket and rear lot climbing crews. Treatment of the transmission rural corridors, conducted on a three-year cycle, are maintained using a combination of integrated vegetation management (IVM). Transmission urban corridors are maintained annually with a more traditional pruning and removal maintenance methods.

* OUC's Transmission Vegetation Management Plan (TVMP) allows until May 30th 2016 for completion.

Vegetation Treatment				
Year	Distribution Total System Miles 1261		Transmission Total System Miles 213 (Urban-Annual, Rural 3 Year Cycle)	
	Planned	Completed	Planned	Completed
2016	333	100%		
2015	335	100%	88	100%
2014	328	100%	99	100%
2013	287	100%	107	100%
2012	332	100%	127	100%
2011	312	100%	107	100%
2010	329	100%	99	100%
2009	328	100%	105	100%
2008	330	100%	99	100%
2007	330	100%	114	100%

2016 Distribution Maintenance Schedule Work Completed

Distribution Vegetation Maintenance Management Schedule 									
Four Year Treatment Cycle									
Line Segment	Circuit Number	Location	Work Scheduled		GIS Mileage				
			Initiated Date	Completion Date	Circuit Total Miles	Non Truck	Limited Acces	Truck	Non Billable Miles
First Quarter - October / December									
106	2-23	Orlando	Jun-15	Jan-16	15.66	4.20		11.46	0.16
107	21-21	Orlando	Sep-15	Oct-15	2.03	0.07		1.96	
108	3-33	Orlando	Jul-15	Jan-16	10.47	4.08		6.39	0.78
109	16-24	Orlando	Jun-15	Oct-15	2.42	0.80		1.62	
110	12-32	Orlando	Sep-15	Feb-16	9.75	4.85		4.90	
111	18-33	Orlando	Jan-16	Feb-16	2.67	0.30		2.37	0.02
112	16-23	Orlando	Dec-16	Feb-16	9.05	3.08		5.97	0.44
113	16-11	Orlando	Jan-16	Feb-16	2.86	1.61		1.25	0.61
114	10-34	Orlando	Jan-16	Feb-16	8.92	1.82		7.10	0.10
115	4-23	Orlando	Nov-15	Feb-16	9.31	4.00		5.31	
116	2-43	Orlando	Jan-16	Feb-16	8.43	3.12		5.31	
117	4-11	Orlando	Jan-16	Jan-16	4.27	1.53		2.74	
Quarterly Total Mileage					85.84	29.46		56.38	2.11
Second Quarter - January / March									
118	6-24	Orlando	Jan-16	Feb-16	4.06	2.26		1.80	
119	32-11	St. Cloud	Feb-16	Feb-16	0.51	0.04		0.47	2.32
120	28-212, 28-222, 28-223	St. Cloud	Feb-16	Mar-16	48.48	13.82		34.66	3.13
121	16-12	Orlando	Feb-16	Mar-16	7.11	3.12		3.99	
122	18-44	Orlando	Feb-16	Feb-16	4.46	0.52		3.94	
123	12-24	Orlando	Jan-16	Mar-16	7.14	2.83		4.31	
124	2-34, 14-32	Orlando	Feb-16	Feb-16	4.79	1.12		3.67	0.87
125	5-21	Orlando	Feb-16	Feb-16	1.29	0.53		0.76	
126	35-21	Orlando	Jan-16	Jan-16	7.31	1.83		5.48	
127	12-26, 12-34	Orlando	Jan-16	Jan-16	5.04	1.83		3.21	
Quarterly Total Mileage					90.19	27.90		62.29	6.32
Third Quarter - April / June									
128	35-12	Orlando	Mar-16	May-16	76.77	11.57		65.20	1.62
129	14-13	Orlando	Mar-16	Jun-16	7.20	3.69		3.51	
130	20-31	Orlando	Mar-16	Apr-16	1.95	0.53		1.42	0.01
131	18-14	Orlando	Mar-16	Mar-16	0.26			0.26	
132	6-322	Orlando	Mar-16	Mar-16	1.24	0.39		0.85	2.76
133	32-11	St. Cloud	Mar-16	Mar-16	0.00				
134	19-23	Orlando	Apr-16	Apr-16	1.87	1.87			
Quarterly Total Mileage					89.29	18.05		71.24	4.39
Forth Quarter - July / September									
135	27-225, 27-232	St. Cloud	Apr-16	Nov-16	11.43	2.11		9.32	
136	11-13	Orlando	Apr-16	Aug-16	5.03	2.20		2.83	
137	10-25	Orlando	Apr-16	hold	10.49	0.44		10.05	0.96
138	9-24	Orlando	Apr-16	Dec-16	7.09	3.33		3.76	0.44
144	18-42, 27-233	St. Cloud	May-16	Nov-16	19.29	15.55	0.31	3.43	1.10
146	1-11	Orlando	Jul-16	Dec-16	3.87	0.20		3.67	
147	27-232	St. Cloud	Nov-16	Nov-16	10.40	1.78		8.62	0.14
Quarterly Total Mileage					67.60	25.61		41.68	2.64
Annual Total Miles					332.92	101.02		231.59	15.46

2017 Distribution Maintenance Schedule Work Plan

Distribution Vegetation Maintenance Management Schedule Three Year Treatment Cycle													
152 9-31 - A Hytred OMS 10,000 Minutes and above													
Line Segment	Circuit Number GIS 6/30/12	CityWorks CityWorks ID:	Location	Work Scheduled		Quality Control		Budgeted Costs Based on GIS Mileage					
				Initiated Date	Completion Date	MILES CALCULATE		Circuit Total Miles	Non Truck Access	Limited Access	Truck Access	Non Billable Miles	Production Cost
Cycle Treatment Year 1 Fiscal Year 2017 (Jan. 2017, to March 2017)													
First Quarter January/March													
139	4-32		Orlando					1.78	0.84		1.12		\$0.00
140	19-11		Orlando					1.50	0.74	0.76			\$0.00
141	5-15		Orlando					2.51	1.92		0.59		\$0.00
142	6-22		Orlando					2.94	2.70	0.08	0.16		\$0.00
143	1-23		Orlando					1.32	0.85		0.47		\$0.00
145	3-31		Orlando					8.13	4.37		0.16	1.65	\$0.00
148	4-13		Orlando					4.10	3.94	0.13	1.63		\$0.00
150	2-33		Orlando					5.48	4.07		1.39		\$0.00
151	33-213		St. Cloud					4.32	3.68	0.28	0.4		\$0.00
152	9-31		Orlando					8.45	7.33		1.12		\$0.00
153	18-32		Orlando					4.28	3.90		0.48		\$0.00
154	20-11		Orlando					6.64	3.28	0.18	3.18	0.69	\$0.00
155	19-12, 20-31		Orlando					3.74	2.00	0.40	1.34	0.30	\$0.00
156	2-42		Orlando					7.43	6.64		0.79	0.03	\$0.00
157	2-14		Orlando					5.51	2.58		2.93	1.48	\$0.00
158	6-23		Orlando					9.38	7.13	0.20	2.05	0.10	\$0.00
159	11-23, 11-43		Orlando					8.85	4.85		2.00		\$0.00
160	12-33		Orlando					6.62	6.15	0.09	0.38	0.18	\$0.00
161	6-13		Orlando					6.55	3.22	0.33	3.00		\$0.00
162	13-13		Orlando					6.47	4.78	0.82	0.87		\$0.00
165	10-21		Orlando					7.27	6.47		0.80		\$0.00
Quarterly Total Mileage								109.21	61.12	3.25	24.84	4.71	\$0.00
Second Quarter - April / June													
163	13-21		Orlando					4.22	3.80		0.42		\$0.00
164	2-22		Orlando					6.68	3.80	0.12	2.74	0.75	\$0.00
166	9-22		Orlando					3.32	3.16	0.02	0.14	0.44	\$0.00
167	5-13		Orlando					6.67	3.50		3.17	0.01	\$0.00
168	10-43		Orlando					5.19	4.39		0.80		\$0.00
169	9-34		Orlando					7.28	4.28		3.00	0.14	\$0.00
170	4-42		Orlando					0.51	0.39		0.18		\$0.00
171	6-14		Orlando					3.57	2.88	0.12	0.57	0.21	\$0.00
172	16-14		Orlando					0.55	0.55			0.01	\$0.00
173	14-44		Orlando					1.80	1.80				\$0.00
174	35-23		Orlando					1.80	1.80			0.80	\$0.00
175	30-38		Orlando					0.70	0.70				\$0.00
176	11-33		Orlando					3.71	3.52		0.19		\$0.00
177	28-222, 33-212, 33-213		St. Cloud					61.11	45.81	0.16	15.14		\$0.00
182	20-32		Orlando					2.31	2.19		0.12		\$0.00
Quarterly Total Mileage								109.00	82.11	0.42	26.47	3.06	\$0.00
Third Quarter - July September													
178	6-11		Orlando					3.49	1.72		1.77		\$0.00
180	6-21		Orlando					3.08	1.44		1.62		\$0.00
181	4-33		Orlando					0.04	0.04				\$0.00
183	10-25, 13-22		Orlando					2.04	0.22		1.82		\$0.00
184	11-31		Orlando					1.84	0.23		1.71		\$0.00
186	5-44		Orlando					4.00	0.67		3.33	0.66	\$0.00
187	21-13		Orlando					0.88	0.42		0.28	0.30	\$0.00
188	4-44, 14-34		Orlando					1.79	0.71		1.08		\$0.00
189	12-35		Orlando					2.80	1.05		1.55		\$0.00
190	33-214		Orlando					3.25	2.88		0.39	0.99	\$0.00
191	30-31, 30-38		St. Cloud					4.17	2.99		1.18	0.21	\$0.00
192	27-231		St. Cloud					17.30	4.14		13.16		\$0.00
193	9-13		Orlando					8.00	1.45		4.55		\$0.00
194	18-42		Orlando					8.31	0.44		7.87		\$0.00
195	16-21		Orlando					4.19	2.39		1.80		\$0.00
196	18-24		Orlando					5.53	0.02		5.51		\$0.00
197	13-11, 13-23		Orlando					2.40	0.48		1.92		\$0.00
198	20-12		Orlando					0.78	0.41		0.37		\$0.00
200	21-11		Orlando					1.42	0.28		1.18		\$0.00
202	5-45		Orlando					0.67				0.67	\$0.00
203	11-34		Orlando					0.01	0.01				\$0.00
204	4-24		Orlando					0.51				0.51	\$0.00
205	4-41		Orlando					0.50				0.50	\$0.00
206	32-14		St. Cloud					0.44	0.44				\$0.00
207	29-221		Holopaw					13.42	13.42				\$0.00
1	3-14	AIRPORT	885	Orlando				5.06					\$0.00
2	10-15		898	Orlando				9.35	2.02		7.33		\$0.00
6	3-23		690	Orlando				3.39	0.96		2.40	1.18	\$0.00
Quarterly Total Mileage								109.03	40.37	0.00	61.92	7.18	\$0.00
Forth Quarter - October / December													
4	1-22	27	Orlando					5.72	0.20		5.52		\$0.00
7	2-11, 12-12, 12-2	690	Orlando					5.50	1.81		3.69	0.82	\$0.00
8	213, 28-223, 28-7	691	St. Cloud					48.59	14.04		32.55	0.28	\$0.00
9	10-11	692	Orlando					7.98	0.66		7.30		\$0.00
10	1-33	693	Orlando					0.80	0.08		0.52	0.58	\$0.00
11	4-12	696	Orlando					5.54	0.18		5.38	0.28	\$0.00
12	1-32	697	Orlando					0.20	0.20				\$0.00
13	4-31	698	Orlando					2.23	1.43		0.80		\$0.00
14	12-11	699	Orlando					13.88	3.15		10.53		\$0.00
15	28-221	700	St. Cloud					6.11	4.49		1.62	5.32	\$0.00
16	12-34, 12-311	701	Orlando					8.29	5.40		2.89	0.33	\$0.00
17	14-23	702	Orlando					6.58	5.76		0.82	0.70	\$0.00
Quarterly Total Mileage								106.00	37.40	0.00	71.80	8.29	\$0.00
Annual Total Miles								436.24	241.00	3.67	184.83	23.24	\$0.00

2016 Transmission Schedule Completed Work

Transmission Vegetation Management Program (TVMP)										
Annual Maintenance Schedule June 1, 2016 - May 30, 2017										
Treatment Cycle Year One										
Last Updated 3/3/2015										
ROW Corridor Segment (Mile)	OUC Line	Description	Structure Number Begin	Structure Number End	Miles Urban	Anticipated Date of Treatment	Date Assigned	Date Completed	Contractor Inventory Segment Q/C Inspection	Q/C Date Inspected OUC
1	5-0212	Pine Hills to Country Club	1	48	3.2	07/19/16	02/02/17			
2	7-02FPC	Pine Hills to FPC at Dolores W/O Emeralda	1	27	1.1	08/11/16	02/02/17			
3	5-0214	Pine Hills to Turkey Lake	428	365	3.0	08/13/16	02/02/17			
4	5-1424	Turkey Lake to Southwood	362	343	1.8	08/06/16	02/02/17			
5	5-2405	South Term Sub 24 to Southwood Sub 5	341	303	1.7	08/04/16	02/02/17			
6	5-0508 A	Southwood to Martin (KingsPointe) East Line	260	201	2.8	09/04/16	02/02/17			
7	7-05FPC	Southwood to Windmere					02/02/17			
8	5-0508 B	Southwood to Martin	1	14	1.8	09/10/16	02/02/17			
9	5-08-30	Martin to Courvention Center	14	16	0.4	09/18/16	02/02/17			
10	5-0405	Holden to Southwood	506	586	3.6	07/29/16	02/02/17			
11	5-0409	Holden to Michigan	2	78	3.2	09/02/16	02/02/17			
12	5-0910	Michigan to America (On Division)	56	132	3.7	10/01/16	02/02/17			
13	5-1013	America to Kaley	1	26	1.4	10/01/16	02/02/17			
14	5-1618	Michigan and Gowen to Bumby and Jersey	1	5	0.2	10/01/16	02/02/17			
15	5-0916	Michigan to Grant	1	52	2.3	10/01/16	02/02/17			
16	5-0609	Michigan to Pershing (Follows Raeford Rd)	2	93	5.5	11/17/16	02/02/17			
17	5-0616	Grant to Pershing	1	27	2.1	10/14/16	02/02/17			
18	7-622	Pershing to Sub 22 Term Site	135	157	3.4	12/04/16	02/02/17			
19	5-0306 A & B	Azalea to Pershing A & B	143	182	4.1	11/28/16	02/02/17			
19	4-27KISS	Shared W/ KUA	2	64	2.6	12/09/16	02/02/17			
Total Urban Annual Treatment Miles					48.1					
Rural ROW Corridors 20-21 TREATMENT ON A THREE YEAR CYCLE										
ROW Corridor Segment (Mile)	OUC Line	Description	Structure Number Begin	Structure Number End	Miles Rural	Anticipated Date of Treatment	Date Assigned	Date Completed	Contractor Inventory Segment Q/C Inspection	Q/C Date Inspected OUC
20a	5-0607 A	Pershing to Indian River A	7	71	32.0	6/1/16				
20b			72	139		6/1/16				
20c			140	209		6/1/16				
20d			210	256		6/1/16				
	5-0607 B	Pershing to Indian River B	0	130		6/1/16				
	7-0717 A	Indian River to Stanton A&B	54E	54B		6/1/16				
	7-0717 B	Indian River to Stanton A&B	135	156		6/1/16				
		Pershing to Stanton (Shares 5-0607) ROW								
	7-0617A	Pershing to Stanton (Shares 5-0607) ROW	1	34		6/1/16				
	7-0617 B		1	34		6/1/16				
	7-17 FPC A	Stanton to Curry Ford	23	53		6/1/16				
	7-17 FPC B	Stanton to Rio Pinar	23	53		6/1/16				
	7-07FPL "A"	Indian River to FPL Canaveral "A"	125	127		6/1/16				
	7-07FPL "B"	Indian River to FPL Canaveral "B"	125	127		6/1/16				
20e	7- SEC PEF	Stanton to Progress Energy	1	60	8.0	6/1/16				
21	4-28FPC-MR	Narcosse@ Kirby Smith to Sub 28	1	176	19.0	9/1/16	02/02/17			
Total Rural Annual Treatment Miles					59.0					
Total Urban + Rural ROW Miles					107.1					

2017 Transmission Schedule Work Plan

Transmission Vegetation Management Program (TVMP)

Annual Maintenance Schedule June 1, 2016 - May 30, 2017

Treatment Cycle Year One



Last Updated 3/9/2016

ROW Corridor Segment (Imp.)	OUC Line	Description	Structure Number Begin	Structure Number End	Miles Urban	Anticipated Date of Treatment	Date Assigned	Date Completed	Contractor Inventory Segment O/C Inspection	O/C Date Inspected OUC
1	5-0212	Pine Hills to Country Club	1	48	3.2	07/19/16				
2	7-02FPC	Pine Hills to FPC at Dolores W/O Emeralds	1	27	1.1	08/11/16				
3	5-0214	Pine Hills to Turkey Lake	426	365	3.0	08/13/16				
4	5-1424	Turkey Lake to Southwood	362	343	1.8	08/06/16				
5	5-2405	South Term Sub 24 to Southwood Sub 5	341	303	1.7	08/04/16				
6	5-0508 A	Southwood to Martin (KingsPointe) East Line	260	201	2.8	09/04/16				
7	7-05FPC	Southwood to Windemere	1	14	1.8	09/10/16				
8	5-0508 B	Southwood to Martin	1	14	0.4	09/13/16				
9	5-08-39	Martin to Convention Center	14	16	3.6	07/29/16				
10	5-0405	Holden to Southwood	506	586	3.2	09/02/16				
11	5-0409	Holden to Michigan	2	78	3.7	10/01/16				
12	5-0910	Michigan to America (On Division)	58	132	1.4	10/01/16				
13	5-1013	America to Kaley	1	26	0.2	10/01/16				
14	5-1618	Michigan and Gowen to Bumby and Jersey	1	5	2.3	10/01/16				
15	5-0916	Michigan to Grant	1	52	5.5	11/17/16				
16	5-0809	Michigan to Pershing (Follows Raeford Rd)	2	93	2.1	10/14/16				
17	5-0616	Grant to Pershing	1	27	3.4	12/04/16				
18	7-622	Pershing to Sub 22 Term Site	135	157	4.1	11/28/16				
19	5-0306 A & B	Azelea to Pershing A & B	143	182	2.6	12/09/16				
19	4-27KISS	Shared W/ KJA	2	64						
Total Urban Annual Treatment Miles					48.1					

Rural ROW Corridors 20-21 TREATMENT ON A THREE YEAR CYCLE										
	OUC Line	Description	Structure Number Begin	Structure Number End	Miles Rural	Anticipated Date of Treatment	Date Assigned	Date Completed	Contractor Inventory Segment O/C Inspection	O/C Date Inspected OUC
20a	5-0607 A	Pershing to Indian River A	7	71	32.0	6/1/16				
20b			72	139		6/1/16				
20c			140	209		6/1/16				
20d			210	256		6/1/16				
	5-0607 B	Pershing to Indian River B	0	130		6/1/16				
	7-0717 A	Indian River to Stanton A&B	54E	54B		6/1/16				
	7-0717 B	Indian River to Stanton A&B	135	156		6/1/16				
	7-0617A	Pershing to Stanton (Shares 5-0607) ROW	1	34		6/1/16				
	7-0617 B	Pershing to Stanton (Shares 5-0607) ROW	1	34		6/1/16				
	7-17 FPC A	Stanton to Curry Ford	23	53		6/1/16				
	7-17 FPC B	Stanton to Rio Pinar	23	53		6/1/16				
	7-07FPL "A"	Indian River to FPL Canaveral "A"	125	127		6/1/16				
	7-07FPL "B"	Indian River to FPL Canaveral "B"	125	127		6/1/16				
20e	7- SEC PEF	Stanton to Progress Energy	1	60	8.0	6/1/16				
21	4-26FPC-MR	Narcossee@ Kirby Smith to Sub 28	1	176	19.0	9/1/16				
Total Rural Annual Treatment Miles					59.0					
Total Urban + Rural ROW Miles					107.1					

6. Storm Hardening Research

Orlando Utilities Commission is a member of the Florida Municipal Electric Association (FMEA), which is participating with all of Florida's electric utilities in storm hardening research through the Public Utility Research Center at the University of Florida. Under separate cover, FMEA is providing the FPSC with a report of research activities. For further information, contact Amy Zubaly, Interim Executive Director, FMEA, 850-224-3314, ext.7, or azubaly@publicpower.com.