

ORLANDO UTILITIES COMMISSION



CALENDAR 2018 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 2018**

1) Introduction

Orlando Utilities Commission

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2) Number of meters served in calendar year 2018

Orlando Utilities Commission served 243,996 electric meters in the Cities of Orlando and St. Cloud and surrounding Orange and Osceola counties as of December 31, 2018.

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 territory is not within a coastal area, and therefore, not subject to storm surges or wide-spread significant flooding.

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, the Orlando Utilities Commission 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, and 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 deposited 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 2018.

Distribution and Transmission Planned Inspections					
Year	Total System Poles	Planned Inspection	Planned Percentage of System	Inspection Completed	Completed Percentage of System
2018	49727	6200	12%	6376	13%
2017	49643	6200	12%	6389	13%
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
2018	2.7%	167
2017	0.4%	27
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: (2018 OUC FAILED 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
2018	167	4	0	167	4
2017	27	2	0	27	2
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
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A total of (167) one hundred sixty-seven poles failed inspection criteria, (4) four poles deemed priority replacement, (4) four are completed. There are (0) zero poles which restoration was deemed necessary using a reinforcing truss. The remaining (163) one hundred sixty-three poles are in progress for replacement in 2019.

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

Attachment 2: (2018 OUC POLE INSPECTION 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 1323 miles of overhead distribution lines and 222 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 ensure 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 ensures clearances within the cycle will be maintained.

The distribution three year cycle is divided into over 197 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 ten 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 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 ensure 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 Ensure 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 ensure 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.

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

Vegetation Management Annual Plan

The 2018 annual budget for Distribution and Transmission Vegetation management was approximately three million dollars and will remain consistent for 2019. OUC plans to continue with treatment of 452 miles of distribution line clearance and 107 miles of transmission ROW to remain on established cycles in 2019. 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.

Vegetation Treatment				
Year	Distribution Total System Miles 1323		Transmission Total System Miles 213 (Urban-Annual, Rural 3 Year Cycle)	
	Planned	Completed	Planned	Completed
2018	421	100%	112	36%*
2017	450	100%	99	100%
2016	333	100%	107	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%

* OUC's Transmission Vegetation Management Plan (TVMP) allows until May 30th 2019 for completion.

2018 OUC Distribution Maintenance Schedule – 3 Year Trimming Cycle Work Completed

Line Segment	Circuit Number	Location	Worked Dates		Budgeted Costs Based on GIS Mileage				
			Initiated Date	Completion Date	Circuit Total Billable Miles	Truck Access (S)	Limited Acces (LA)	Rear Lot (R)	Non Billable Miles
Yr. 2 First Quarter - October / December 2017									
1	3-14	Orlando	10/7/2017	12/30/17	9.35	7.33		2.02	
2	10-12	Orlando	08/15/17	8/26/2017	3.39	2.40		0.99	1.16
4	1-22	Orlando	10/7/2017	10/21/2017	5.72	5.52		0.20	
6	3-23	Orlando	9/16/2017	9/30/2017	2.69	1.14		1.55	1.88
5	14-41	Orlando		No Work	0.00				0.20
8	27-231, 28-213, 28-223, 29-224	St. Cloud	11/13/17	12/9/17	46.59	32.55		14.04	0.26
9	10-11	Orlando	10/7/2017	12/9/17	7.96	7.30		0.66	
10	1-33	Orlando	10/7/2017	10/7/2017	0.60	0.52		0.08	0.58
11	4-12	Orlando	10/28/2017	11/11/2017	5.51	5.33		0.18	0.28
12	1-32	Orlando	12/30/17	12/30/17	0.20			0.20	
13	4-31	Orlando	10/21/17	12/19/17	2.23	0.80		1.43	
15	32-222	St. Cloud	11/09/17	12/16/17	5.75	1.62		4.13	5.32
17	14-23	Orlando	10/30/17	1/13/2018	6.56	0.82		5.74	0.71
18	12-31	Orlando	10/30/17	04/29/18	6.66	4.25		2.41	
191	30-31, 30-36	St. Cloud	6/10/2017	7/1/2017	4.17	1.18		2.99	0.21
202	5-45	Orlando	No Work	No Work	0.00				0.67
204	4-24	Orlando	No Work	No Work	0.00				0.51
205	4-41	Orlando	No Work	No Work	0.00				0.50
Quarterly Mileage					107.38	70.76	0.00	36.62	12.28
Yr. 2 Second Quarter - January / March 2018									
19	2-332	Orlando	1/17/2018	2/3/2018	4.37	3.02		1.35	4.34
20	27-222	St. Cloud	12/9/2017	12/16/2017	3.02	2.35		0.67	0.03
21	9-21	Orlando	1/22/2018	2/13/2018	5.01	2.08		2.93	1.27
22	3-21	Orlando	1/17/2018	2/10/2018	5.10	3.52		1.58	
23	2-11, 2-34	Orlando	12/23/2017	1/6/18	1.67	1.36		0.31	0.02
24	1-13	Orlando	12/23/2017	2/10/2018	6.64	5.21		1.43	
25	2-31	Orlando	12/23/2017	2/20/2018	11.76	9.53		2.23	
26	14-24	Orlando	1/9/2018	2/2/2018	0.31	0.31			1.23
27	9-11	Orlando	1/9/2018	2/5/2018	9.23	7.12		2.11	1.11
28	29-223	St. Cloud	12/11/2017	12/16/2017	20.68	17.09		3.59	0.12
29	35-22	Orlando	No Work	No Work	0.00				0.50
30	2-41	Orlando	1/9/2018	1/20/2018	8.82	6.94		1.88	0.02
31	21-12	Orlando	1/9/2018	1/20/2018	1.39	1.03		0.36	
32	1-34	Orlando	1/15/2018	1/15/2018	8.04	6.65		1.39	0.22
33	2-13	Orlando	1/15/2018	3/5/2018	8.89	4.26		4.63	1.00
34	35-11, 35-21	Orlando	1/17/2018	1/27/2018	1.97	0.94		1.03	
37	9-32	Orlando	1/22/2018	3/8/2018	7.26	6.21		1.05	
Quarterly Total Mileage					104.16	77.62	0.00	26.54	9.86
Yr. 2 Third Quarter - April / June 2018 (Due Date June 30, 2018)									
35	1-14	Orlando	2/12/2018	2/26/2018	6.79	3.07		3.72	
36	11-24, 11-32	Orlando	2/5/2018	2/6/2018	1.92	1.33	0.08	0.51	
38	10-42	Orlando	2/5/2018	2/10/2018	1.42	1.33		0.09	
39	35-32	Orlando	2/12/2018	3/17/2018	6.73	2.40		4.33	
40	1-43	Orlando	2/5/2018	3/10/2018	2.90	2.57		0.33	
42	2-12	Orlando	3/5/2018	6/5/2018	6.38	1.94		4.44	0.83
43	27-214, 27-221, 27-231	St. Cloud	2/19/2018	2/26/2018	14.01	12.16		1.85	0.10
44	9-23	Orlando	2/5/2018	2/13/2018	6.59	6.10		0.49	0.51
45	5-22	Orlando	3/5/2018	6/15/2018	5.26	0.52		4.74	1.26
46	21-14	Orlando	3/7/2018	3/7/2018	0.04	0.04			
48	35-33	Orlando	2/27/2018	3/14/2018	12.30	7.90		4.40	
49	11-21, 11-32, 11-42	Orlando	2/10/2018	3/24/2018	12.15	9.68		2.47	
50	2-24	Orlando	2/12/2018	3/24/2018	11.93	7.49		4.44	
52	16-22	Orlando	2/28/2018	6/5/2018	9.89	3.94		5.95	0.59
Quarterly Total Mileage					98.31	60.47	0.08	37.76	3.29
Yr. 2 Forth Quarter - July / September 2018 (Due Date September 30, 2018)									
41	12-22	Orlando	4/30/2018	8/7/2018	3.20	2.52		0.68	
51	30-22	Orlando	4/16/2018	5/5/2018	1.35	0.16		1.19	
53	14-16	Orlando	6/11/2018	6/11/2018	0.96	0.74		0.22	0.12
54	19-14, 32-11	Orlando	4/16/2018	5/24/2018	12.61	6.05		6.56	
55	27-221, 27-233	St. Cloud	8/20/2018	2/2/2019	17.62	14.85		2.77	
56	11-41	Orlando	6/25/2018	2/16/2019	8.99	7.42		1.57	0.41
57	5-24	Orlando	4/16/2018	4/17/2018	0.67	0.67			
58	4-23, 14-11, 14-22	Orlando	6/11/2018	7/14/2018	8.81	6.86		1.95	
59	21-24	Orlando	7/12/2018	7/13/2018	1.35	1.35			
60	3-24	Orlando	10/2/2018	10/19/2018	8.14	4.64		3.50	
61	14-34	Orlando	8/20/2018	2/2/2019	1.49	1.19		0.30	0.84
62	11-43	Orlando	7/12/2018	8/18/2018	7.11	5.91		1.20	0.45
63	28-214, 28-222, 32-222	St. Cloud	10/1/2018	2/2/2019	37.35	30.31		7.04	0.00
64	30-22, 30-36	Orlando	10/5/2018	11/9/2018	1.68	0.79		0.89	0.51
Quarterly Total Mileage					111.33	83.46	0.00	27.87	2.33
Annual Total Miles					421.18	292.31	0.08	128.79	27.76

**2019 OUC Distribution Maintenance Schedule – 3 Year Trimming Cycle
Work Plan**

Line Segment	Circuit Number	Location	Worked Dates		Budgeted Costs Based on GIS Mileage				
			Initiated Date	Completion Date	Circuit Total Billable Miles	Truck Access (S)	Limited Access (LA)	Rear Lot (R)	Non Billable Miles
Yr. 3 First Quarter - October / December 2018									
65	33-211	St. Cloud	1/18/2019	2/2/2019	4.81	4.59		0.22	
66	9-33	Orlando	12/21/2018	Open	4.36	3.41		0.95	0.69
67	12-13, 12-33, 12-34	Orlando			7.41	5.38		2.03	0.23
68	21-13, 21-25	Orlando			1.46	1.31		0.15	
69	4-21, 5-15	Orlando			5.06	4.00		1.06	0.70
70	4-22	Orlando	1/9/2019	Open	6.67	5.88		0.79	
71	6-311, 20-342	Orlando			4.49	1.24	2.38	0.87	
72	5-16	Orlando			1.61	0.13		1.48	
73	19-12, 19-24	Orlando	1/22/2019	Open	4.16	1.00		3.16	0.34
74	14-31	Orlando			1.73	1.17		0.56	0.84
76	5-43	Orlando	1/7/2019	Open	3.14	2.22		0.92	0.06
77	1-42	Orlando			4.40	4.37		0.03	0.01
79	35-25	Orlando			11.89	8.38	3.51		0.74
80	2-351	Orlando	11/17/2018	2/2/2019	5.37	2.62		2.75	1.12
81	3-13	Orlando			8.74	2.86		5.88	0.19
83	3-32	Orlando			8.98	7.46		1.52	0.01
84	21-22	Orlando			0.39	0.11		0.28	1.37
85	29-224	St. Cloud	11/27/2018	11/30/2018	0.49	0.49			
86	32-221, 32-222	St. Cloud	11/27/2018	Open	24.78	18.53		6.25	
Quarterly Total Mileage					109.94	75.15	5.89	28.90	6.30
Yr. 3 Second Quarter - January / March 2019									
75	14-33	Orlando			3.36	2.12		1.24	
78	14-12	Orlando			2.37	0.30		1.96	0.11
82	1-21	Orlando			0.24			0.24	
87	6-12, 16-13	Orlando			2.19	0.51		1.68	
88	5-11	Orlando			2.70	1.74		0.96	
89	30-36	Orlando			0.03				0.03
90	30-14	Orlando			0.89	0.05		0.26	0.58
91	14-11, 14-42	Orlando			2.43	1.95		0.48	
92	30-22, 30-31	Orlando			1.50	0.19		0.04	1.27
93	11-32	Orlando			2.37	0.18		2.19	
94	21-35	Orlando			0.36	0.03		0.33	
95	27-211, 33-211	St. Cloud			39.13	18.91		20.22	
96	14-32	Orlando			12.77	2.90		9.13	0.74
98	35-13	Orlando			1.25	0.04		0.60	0.61
100	19-13	Orlando			11.43	2.21		9.22	
101	11-11	Orlando			2.09	0.01		0.88	1.20
103	19-31, 20-31	Orlando			1.03	0.34		0.39	0.30
104	14-33, 14-43	Orlando			2.34	0.66		0.40	1.28
105	6-321, 20-341	Orlando			4.55	0.54		1.15	2.86
106	2-23, 18-32	Orlando			16.17	4.55		11.46	0.16
109	16-24	Orlando			2.43	0.81		1.62	
111	18-33	Orlando			2.70	0.31		2.37	0.02
Quarterly Total Mileage					114.33	38.35	0.00	66.82	9.16
Yr. 3 Third Quarter - April / June 2019									
107	21-21	Orlando			1.94			1.94	
108	3-33	Orlando			11.24	4.07		6.39	0.78
110	12-32	Orlando			9.65	4.75		4.90	
112	16-23	Orlando			9.50	3.09		5.97	0.44
113	16-11	Orlando			3.48	1.62		1.25	0.61
114	10-34	Orlando			8.03	0.83		7.10	0.10
115	4-23	Orlando			9.25	3.94		5.31	
116	2-43	Orlando			8.43	3.12		5.31	
120	28-212, 28-222, 28-223	St. Cloud			52.35	14.93		34.29	3.13
Quarterly Total Mileage					113.87	36.35	0.00	72.46	5.06
Yr. 3 Forth Quarter - July / September 2019									
102	4-14	Orlando			10.72	5.33		5.39	
117	4-11, 4-21	Orlando			4.15	1.41		2.74	
118	6-24	Orlando			4.07	2.27		1.80	
119	32-11	St. Cloud			2.84	0.05		0.47	2.32
121	16-12	Orlando			7.12	3.13		3.99	
122	18-33, 18-42	Orlando			4.24	0.30		3.94	
123	12-24	Orlando			6.56	2.24		4.32	
124	2-34, 14-32	Orlando			5.25	0.71		3.67	0.87
125	5-21	Orlando			1.29	0.53		0.76	
126	35-21	Orlando			10.42	4.94		5.48	
127	12-26, 12-34	Orlando			5.69	2.48		3.21	
129	14-13	Orlando			7.22	3.71		3.51	
130	20-31	Orlando			1.99	0.56		1.42	0.01
131	18-14	Orlando			0.25			0.25	
132	6-322	Orlando			3.56			0.80	2.76
134	19-23	Orlando			2.39	2.39			
135	27-225, 33-221	St. Cloud			12.58	3.26		9.32	
136	11-13, 11-23	Orlando			5.30	2.47		2.83	
137	10-35	Orlando			11.11	0.10		10.05	0.96
138	9-24	Orlando			7.55	3.35		3.76	0.44
Quarterly Total Mileage					114.27	39.21	0.00	67.70	7.36
Annual Total Miles					452.41	189.06	5.89	235.88	27.88

**2018 OUC Transmission Schedule - Urban (Annual Cycle) & Rural (3-Year Cycle)
Completed Work**

Annual Maintenance Schedule June 1, 2018 - May 30, 2019									
Treatment Cycle Year Three									
Urban ROW Corridors 1 - 19 TREATMENT ON AN ANNUAL CYCLE									
ROW Segment	OUC Line	Description	Structure Number Begin	Structure Number End	Miles Urban	Past Treatment	Date Assigned	Date Completed	
1	5-0212	Pine Hills to Country Club	1	48	3.2	4/14/18	06/01/18		
2	7-02FPC	Pine Hills to FPC at Dolores W/O Emeraldalda	1	27	1.1	2/10/18	06/01/18		
3	5-0214	Pine Hills to Turkey Lake	428	365	3.0	02/09/18	06/01/18		
4	5-1424	Turkey Lake to Southwood	362	343	1.8	02/09/18	06/01/18		
5	5-2405	Southwood Sub 5	341	303	1.7	02/08/18	06/01/18		
6	5-0508 A	Southwood to Martin (KingsPointe) East Line	260	201	2.8	REMOVED	REMOVED		
	7-05FPC	Southwood to Windemere				01/20/18	06/01/18		
7	5-0508 B	Southwood to Martin	1	14	1.8	01/20/18	06/01/18		
8	5-08-30	Martin to Counvention Center	14	16	0.4	01/20/18	06/01/18		
9	5-0405	Holden to Southwood	506	586	3.6	02/08/18	06/01/18		
10	5-0409	Holden to Michigan	2	78	3.2	04/18/18	06/01/18		
11	5-0910	Michigan to America (On Division)	56	132	3.7	02/07/18	06/01/18		
12	5-1013	America to Kaley	1	26	1.4	02/06/18	06/01/18		
13	5-1618	Michigan and Gowen to Bumby and Jersey	1	5	0.2	02/06/18	06/01/18		
14	5-0916	Michigan to Grant	1	52	2.3	02/05/18	06/01/18		
15	5-0609	Michigan to Pershing (Follows Raeford Rd)	2	93	5.5	02/03/18	06/01/18		
16	5-0616	Grant to Pershing	1	27	2.1	02/10/18	06/01/18		
17	7-622	Pershing to Sub 22 Term Site	135	157	3.4	01/31/18	06/01/18		
18	5-0306 A & B	Azalea to Pershing A & B	143	182	4.1	01/31/18	06/01/18		
	4-27KISS	Shared W/ KUA	2	64	2.6	01/22/18	06/01/18		
Total Urban Annual Treatment Miles					48.1				
1/3 of Rural ROW Corridors (28 thru 33) - THREE YEAR CYCLE									
	OUC Line	Description	Structure Number Begin	Structure Number End	Miles Rural	Past Treatment	Date Assigned	Date Completed	
28	7-1517	Sub 15 to Sub 17	67	180	23.9	3/26/16	06/01/18	09/13/18	
	7-SEC-1	Stanton Unit 1 Generator						09/13/18	
	7-SEC-2	Stanton unit 2 Generator						09/13/18	
	7-17RAT2	SEC Reserve Aux Trans 2						09/13/18	
	7-17RAT1	SEC Reserve Aux Trans 1						09/13/18	
	7-1731	Sub 17 to SEC A						09/13/18	
	7-1736	Sub 17 to SEC B	TBD	TBD				09/13/18	
	7-15 19	Taft to Airport Industrial Park	1A	14				09/13/18	
	7-2332	Sub 32 to Sub 23 South Term Site	102A	109				09/13/18	
29	4-2728	Central to North	1	120	8.6	03/28/15	06/01/18	09/10/18	
30	4-2829				7.6	06/04/15	06/01/18	01/15/19	
31	7-29FPC	North to Holopaw	1	69	8.1	03/26/15	06/01/18		
32	5-2933	Sub 29 to Sub 33			10.8	06/01/12	06/01/18		
33	5-3327	Sub 33 to Sub 27 CS Termination			4.7	06/01/12	06/01/18		
Total Proposed Annual Treatment Miles					63.6				
Total Urban + Rural ROW Miles					111.8				

2019 OUC Transmission Schedule – Urban (Annual Cycle) & Rural (3-Year Cycle) Work Plan

Annual Maintenance Schedule June 1, 2019 - May 30, 2020									
Treatment Cycle Year One									
Last Updated	9/24/2018								
ROW Segment	OUC Line	Description	Structure Number Begin	Structure Number End	Miles Urban	Past Treatment	Date Assigned	Date Completed	
1	5-0212	Pine Hills to Country Club	1	48	3.2				
2	7-02FPC	Pine Hills to FPC at Dolores W/O Emeraldalda	1	27	1.1				
3	5-0214	Pine Hills to Turkey Lake	428	365	3.0				
4	5-1424	Turkey Lake to Southwood	362	343	1.8				
5	5-2405	South Term Sub 24 to Southwood Sub 5	341	303	1.7				
6	5-0508 A	Southwood to Martin (KingsPointe) East Line	260	201	2.8				
	7-05FPC	Southwood to Windemere							
7	5-0508 B	Southwood to Martin	1	14	1.8				
8	5-08-30	Martin to Couvention Center	14	16	0.4				
9	5-0405	Holden to Southwood	506	586	3.6				
10	5-0409	Holden to Michigan	2	78	3.2				
11	5-0910	Michigan to America (On	56	132	3.7				
12	5-1013	America to Kaley	1	26	1.4				
13	5-1618	Michigan and Gowen to Bumby and Jersey	1	5	0.2				
14	5-0916	Michigan to Grant	1	52	2.3				
15	5-0609	Michigan to Pershing (Follows Raeford Rd)	2	93	5.5				
16	5-0616	Grant to Pershing	1	27	2.1				
17	7-622	Pershing to Sub 22 Term Site	135	157	3.4				
18	5-0306 A & B	Azalea to Pershing A & B	143	182	4.1				
19	4-27KISS	Shared W/ KUA	2	64	2.6				
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	Past Treatment	Date Assigned	Date Completed	
20a	5-0607 A	Pershing to Indian River A	7	71	32.0	02/25/17			
20b			72	139		02/25/17			
20c			140	209		02/25/17			
20d			210	256		02/25/17			
	5-0607 B	Pershing to Indian River B	0	130		02/25/17			
	7-0717 A	Indian River to Stanton A&B	54E	54B		02/25/17			
	7-0717 B	Indian River to Stanton A&B	135	156		02/25/17			
	7-0617A	Pershing to Stanton (Shares 5-0607) ROW	1	34		02/25/17			
	7-0617 B	Pershing to Stanton (Shares 5-0607) ROW	1	34		02/25/17			
	7-17 FPC A	Stanton to Curry Ford	23	53		02/25/17			
	7-17 FPC B	Stanton to Rio Pinar	23	53		02/25/17			
	7-07FPL"A"	Indian River to FPL Canaveral "A"	125	127		02/25/17			
	7-	Indian River to FPL Canaveral "B"	125	127		02/25/17			
20e	7- SEC	Stanton to Progress Energy	1	60	8.0	02/25/17			
21	4-28FPC-MR	Narcosse@ Kirby Smith to Sub 28	1	176	19.0	03/25/17			
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, Executive Director, FMEA, 850-224-3314, ext.1, or azubaly@publicpower.com.

LocationID	Length	OrigTreat	RjctStatus	PrCyleInfo	Treatment
89371	30	Creosote	X - Excavated Reject	Osmose	Full Excavate-External Treatment
89414	45	Creosote	X - Excavated Reject	Osmose	Full Excavate-External Treatment MITC Fume
89448	40	Penta	X - Excavated Reject	Osmose	Full Excavate-External Treatment
89450	30	Penta	X - Excavated Reject	Osmose	Full Excavate-External Treatment
89667	35	Penta	X - Excavated Reject	Osmose	Partial Excavate-MITC Fume External Treatment
89755	35	Penta	VX - Visual Reject	Osmose	Sound & Bore-MITC Fume
89772	30	Penta	X - Excavated Reject	Osmose	Full Excavate-MITC Fume External Treatment
89794	35	Penta	X - Excavated Reject	Osmose	Full Excavate-External Treatment
89818	30	Creosote	X - Excavated Reject	Osmose	Full Excavate-External Treatment
89880	35	Penta	X - Excavated Reject	Osmose	Partial Excavate-External Treatment
89906	45	Creosote	X - Excavated Reject	Osmose	Partial Excavate-External Treatment
89968	45	Creosote	TX - External Treat Reject	Osmose	Full Excavate-MITC Fume External Treatment
90015	45	Penta	X - Excavated Reject	Osmose	Full Excavate-External Treatment
90033	50	Creosote	X - Excavated Reject	Osmose	Full Excavate-MITC Fume External Treatment
90040	50	CCA Type C	TX - External Treat Reject	Osmose	Full Excavate-External Treatment
90058	45	Penta	BX - Sound & Bore Reject	Osmose	Full Excavate-External Treatment
90060	35	Creosote	X - Excavated Reject	Osmose	Full Excavate-MITC Fume External Treatment
90135	40	Penta	X - Excavated Reject	Osmose	Full Excavate-External Treatment
90143	30	Penta	X - Excavated Reject	Osmose	Full Excavate-MITC Fume External Treatment
90163	45	Creosote	TX - External Treat Reject	Osmose	Full Excavate-MITC Fume External Treatment
90176	35	Creosote	TX - External Treat Reject	Osmose	Full Excavate-MITC Fume External Treatment
90321	30	Penta	X - Excavated Reject	Osmose	Full Excavate-External Treatment
90363	45	Creosote	X - Excavated Reject	Osmose	Full Excavate-MITC Fume External Treatment
90446	45	Creosote	X - Excavated Reject	Osmose	Full Excavate-External Treatment MITC Fume
90472	45	Penta	BX - Sound & Bore Reject	Osmose	Partial Excavate-MITC Fume External Treatment
90548	50	Penta	X - Excavated Reject	Osmose	Sound & Bore-MITC Fume External Treatment
90577	55	CCA Type C	X - Excavated Reject		
90583	40	Penta	VX - Visual Reject	Osmose	Full Excavate-External Treatment
90614	30	Penta	BX - Sound & Bore Reject	Osmose	Sound & Bore-MITC Fume
90615	35	Creosote	BX - Sound & Bore Reject	Osmose	Full Excavate-MITC Fume External Treatment
90617	30	Creosote	X - Excavated Reject	Osmose	Full Excavate-MITC Fume External Treatment
90642	35	Creosote	X - Excavated Reject	Osmose	Full Excavate-External Treatment
90658	40	Penta	X - Excavated Reject	Osmose	Full Excavate-MITC Fume External Treatment
90774	45	Creosote	X - Excavated Reject	Osmose	Full Excavate-MITC Fume External Treatment
90794	40	Creosote	BX - Sound & Bore Reject	Osmose	Full Excavate-MITC Fume External Treatment
90854	40	Penta	X - Excavated Reject	Osmose	Partial Excavate-MITC Fume External Treatment
90873	45	Penta	BX - Sound & Bore Reject	Osmose	Full Excavate-MITC Fume External Treatment
90892	35	Creosote	X - Excavated Reject	Osmose	Full Excavate-MITC Fume External Treatment
90987	40	Penta	X - Excavated Reject	Osmose	Full Excavate-External Treatment MITC Fume
91051	45	Creosote	TX - External Treat Reject	Osmose	Full Excavate-External Treatment
91160	35	Penta	X - Excavated Reject	Osmose	Full Excavate-External Treatment MITC Fume
91171	40	Penta	X - Excavated Reject	Osmose	Full Excavate-External Treatment
91180	35	Penta	TX - External Treat Reject	Osmose	Full Excavate-External Treatment
91197	45	Penta	TX - External Treat Reject	Osmose	Full Excavate-External Treatment-Previously Rejected
91224	35	Creosote	X - Excavated Reject	Osmose	Full Excavate-No Treatment-Previously Rejected
91303	45	Creosote	BX - Sound & Bore Reject	Osmose	Sound & Bore-MITC Fume

91314	45	Creosote	BX - Sound & Bore Reject	Osmose	Sound & Bore-MITC Fume
91341	35	Penta	X - Excavated Reject	Osmose	Full Excavate-MITC Fume External Treatment
91374	35	Creosote	TX - External Treat Reject	Osmose	Full Excavate-MITC Fume External Treatment
91398	35	Creosote	TX - External Treat Reject	Osmose	Full Excavate-MITC Fume External Treatment
91425	35	Penta	X - Excavated Reject	Osmose	Full Excavate-External Treatment
91509	35	Penta	BX - Sound & Bore Reject	Osmose	Sound & Bore-No Treatment-Previously Rejected
91527	45	Penta	BX - Sound & Bore Reject	Osmose	Sound & Bore-MITC Fume
91576	35	Penta	TX - External Treat Reject	Osmose	Full Excavate-External Treatment
91587	40	Creosote	TX - External Treat Reject	Osmose	Full Excavate-MITC Fume External Treatment
91628	55	Creosote	TX - External Treat Reject		
91629	40	Penta	X - Excavated Reject	Osmose	Partial Excavate-External Treatment
91644	35	Penta	TX - External Treat Reject	Osmose	Full Excavate-MITC Fume External Treatment
91656	30	Creosote	X - Excavated Reject	Osmose	Sound & Bore-MITC Fume
91708	45	Penta	X - Excavated Reject	Osmose	Full Excavate-External Treatment
91832	40	Creosote	TX - External Treat Reject	Osmose	Full Excavate-MITC Fume External Treatment
91854	45	Creosote	X - Excavated Reject	Osmose	Full Excavate-External Treatment MITC Fume
91910	45	Creosote	X - Excavated Reject	Osmose	Full Excavate-MITC Fume
91921	30	Creosote	TX - External Treat Reject	Osmose	Full Excavate-External Treatment
91945	30	Penta	X - Excavated Reject	Osmose	Full Excavate-External Treatment MITC Fume
91972	40	Penta	X - Excavated Reject	Osmose	Full Excavate-No Treatment-Previously Rejected
92003	45	Penta	X - Excavated Reject	Osmose	Full Excavate-External Treatment
92005	30	Penta	X - Excavated Reject	Osmose	Full Excavate-External Treatment
92045	45	Penta	X - Excavated Reject	Osmose	Full Excavate-MITC Fume External Treatment
92063	45	Creosote	X - Excavated Reject	Osmose	Full Excavate-MITC Fume Hollow Heart External Treatment
92140	35	Penta	X - Excavated Reject	Osmose	Sound & Bore-MITC Fume
92194	35	Creosote	X - Excavated Reject	Osmose	Full Excavate-MITC Fume External Treatment
92234	45	Creosote	X - Excavated Reject	Osmose	Partial Excavate-External Treatment MITC Fume
92240	45	Creosote	BX - Sound & Bore Reject	Osmose	Partial Excavate-External Treatment
92250	40	Creosote	BX - Sound & Bore Reject	Osmose	Full Excavate-External Treatment MITC Fume
92280	45	Creosote	TX - External Treat Reject	Osmose	Partial Excavate-MITC Fume External Treatment
92286	45	Penta	BX - Sound & Bore Reject	Osmose	Full Excavate-External Treatment
92287	45	Creosote	BX - Sound & Bore Reject	Osmose	Sound & Bore-MITC Fume
92406	35	Penta	X - Excavated Reject	Osmose	Full Excavate-External Treatment
92434	35	Creosote	X - Excavated Reject	Osmose	Full Excavate-External Treatment MITC Fume
92449	45	Creosote	X - Excavated Reject	Osmose	Sound & Bore-MITC Fume
92471	40	Creosote	TX - External Treat Reject	Osmose	Full Excavate-MITC Fume External Treatment
92683	35	Creosote	VX - Visual Reject	Osmose	Sound & Bore-MITC Fume
92686	45	Creosote	X - Excavated Reject	Osmose	Full Excavate-External Treatment MITC Fume
92728	40	Penta	X - Excavated Reject	Osmose	Full Excavate-MITC Fume External Treatment
92731	40	Penta	X - Excavated Reject	Osmose	Full Excavate-External Treatment MITC Fume
92928	45	Creosote	X - Excavated Reject	Osmose	Full Excavate-MITC Fume Hollow Heart External Treatment
93026	45	CCA Type C	BX - Sound & Bore Reject	Osmose	Full Excavate-External Treatment
93027	45	Creosote	X - Excavated Reject	Osmose	Full Excavate-External Treatment
93031	25	Creosote	BX - Sound & Bore Reject	Osmose	Partial Excavate-MITC Fume External Treatment
93044	45	Creosote	TX - External Treat Reject	Osmose	Full Excavate-WoodFume External Treatment
93094	45	Creosote	TX - External Treat Reject	Osmose	Full Excavate-MITC Fume External Treatment
93117	45	Creosote	X - Excavated Reject	Osmose	Full Excavate-MITC Fume External Treatment

93120	35	Creosote	X - Excavated Reject		
93130	50	Creosote	BX - Sound & Bore Reject	Osmose	Sound & Bore-MITC Fume
93157	45	Penta	BX - Sound & Bore Reject	Osmose	Sound & Bore-MITC Fume
93187	45	Creosote	X - Excavated Reject	Osmose	Partial Excavate-MITC Fume External Treatment
93229	45	Creosote	TX - External Treat Reject	Osmose	Full Excavate-MITC Fume External Treatment
93242	35	Creosote	X - Excavated Reject	Osmose	Full Excavate-MITC Fume External Treatment
93248	30	Creosote	X - Excavated Reject	Osmose	Full Excavate-External Treatment
93277	45	Creosote	BX - Sound & Bore Reject	Osmose	Full Excavate-External Treatment
93396	45	Penta	X - Excavated Reject	Osmose	Full Excavate-External Treatment MITC Fume
93508	30	Penta	BX - Sound & Bore Reject	Osmose	Full Excavate-MITC Fume External Treatment
93510	40	Creosote	VX - Visual Reject	Osmose	Sound & Bore-MITC Fume
93548	40	Penta	X - Excavated Reject	Osmose	Full Excavate-MITC Fume External Treatment
93580	40	Penta	X - Excavated Reject	Osmose	Full Excavate-External Treatment MITC Fume
93662	35	Penta	BX - Sound & Bore Reject	Osmose	Partial Excavate-External Treatment
93724	45	Creosote	X - Excavated Reject	Osmose	Partial Excavate-MITC Fume External Treatment
93734	45	Creosote	X - Excavated Reject	Osmose	Full Excavate-External Treatment
93740	35	Penta	X - Excavated Reject	Osmose	Full Excavate-External Treatment MITC Fume
93746	45	Penta	X - Excavated Reject	Osmose	Full Excavate-External Treatment
93769	45	Creosote	TX - External Treat Reject	Osmose	Full Excavate-Internal Treat External Treatment
93800	35	Creosote	TX - External Treat Reject	Osmose	Full Excavate-MITC Fume External Treatment
93801	50	Penta	TX - External Treat Reject	Osmose	Full Excavate-External Treatment
93817	45	Penta	TX - External Treat Reject	Osmose	Full Excavate-External Treatment
93829	40	Creosote	TX - External Treat Reject	Osmose	Sound & Bore-MITC Fume
93854	40	Penta	BX - Sound & Bore Reject	Osmose	Sound & Bore-MITC Fume
93880	40	Penta	X - Excavated Reject	Osmose	Full Excavate-External Treatment
93925	35	Penta	X - Excavated Reject	Osmose	Full Excavate-External Treatment
93946	45	Penta	X - Excavated Reject	Osmose	Full Excavate-External Treatment
93957	30	Penta	X - Excavated Reject	Osmose	Full Excavate-External Treatment
94035	45	Creosote	X - Excavated Reject	Osmose	Full Excavate-MITC Fume Internal Treat External Treatment
94051	45	Penta	BX - Sound & Bore Reject	Osmose	Full Excavate-External Treatment
94098	45	Penta	X - Excavated Reject	Osmose	Full Excavate-External Treatment
94105	25	Creosote	X - Excavated Reject	Osmose	Full Excavate-External Treatment
94229	30	Penta	TX - External Treat Reject	Osmose	Full Excavate-External Treatment
94233	45	Creosote	X - Excavated Reject	Osmose	Full Excavate-MITC Fume External Treatment
94238	30	Creosote	BX - Sound & Bore Reject	Osmose	Sound & Bore-No Treatment-Previously Rejected
94323	35	CCA Type C	X - Excavated Reject	Osmose	Visual-No Treatment
94326	45	Creosote	X - Excavated Reject	Osmose	Full Excavate-MITC Fume External Treatment Internal Treat
94352	35	Penta	VX - Visual Reject	Osmose	Full Excavate-External Treatment-Previously Rejected
94385	30	Penta	X - Excavated Reject	Osmose	Full Excavate-External Treatment
94412	40	Penta	X - Excavated Reject	Osmose	Full Excavate-No Treatment-Previously Rejected
94513	45	Creosote	TX - External Treat Reject	Osmose	Full Excavate-External Treatment
94533	45	Creosote	BX - Sound & Bore Reject	Osmose	Sound & Bore-MITC Fume
94566	45	Creosote	X - Excavated Reject	Osmose	Full Excavate-External Treatment
94580	30	CCA Type C	TX - External Treat Reject	Osmose	Full Excavate-Internal Treat External Treatment
94615	35	CCA Type C	BX - Sound & Bore Reject	Osmose	Visual-No Treatment
94620	35	Penta	X - Excavated Reject	Osmose	Full Excavate-MITC Fume External Treatment
94633	45	Penta	X - Excavated Reject	Osmose	Partial Excavate-External Treatment

94662	30	Creosote	X - Excavated Reject	Osmose	Full Excavate-MITC Fume External Treatment
94680	45	Creosote	BX - Sound & Bore Reject	Osmose	Sound & Bore-MITC Fume
94693	45	Penta	X - Excavated Reject	Osmose	Full Excavate-External Treatment
94701	45	Penta	X - Excavated Reject	Osmose	Full Excavate-External Treatment
94716	40	Creosote	TX - External Treat Reject	Osmose	Full Excavate-External Treatment
94766	30	Penta	X - Excavated Reject	Osmose	Full Excavate-External Treatment
94782	35	Creosote	TX - External Treat Reject	Osmose	Full Excavate-MITC Fume External Treatment
94800	30	Creosote	X - Excavated Reject	Osmose	Full Excavate-External Treatment MITC Fume
94815	45	Penta	X - Excavated Reject	Osmose	Partial Excavate-MITC Fume External Treatment
94862	30	Creosote	X - Excavated Reject	Osmose	Sound & Bore-MITC Fume
94994	45	Penta	BX - Sound & Bore Reject	Osmose	Sound & Bore-No Treatment-Previously Rejected
95075	45	Penta	X - Excavated Reject	Osmose	Full Excavate-No Treatment-Previously Rejected
95162	45	Penta	X - Excavated Reject	Osmose	Full Excavate-External Treatment MITC Fume
95187	45	Creosote	X - Excavated Reject	Osmose	Full Excavate-External Treatment MITC Fume
95284	45	Creosote	BX - Sound & Bore Reject	Osmose	Visual-MITC Fume
95292	40	Penta	X - Excavated Reject	Osmose	Full Excavate-External Treatment
95320	40	Penta	X - Excavated Reject	Osmose	Sound & Bore-MITC Fume
95413	45	Creosote	TX - External Treat Reject	Osmose	Full Excavate-MITC Fume External Treatment
95423	35	Creosote	X - Excavated Reject	Osmose	Full Excavate-External Treatment MITC Fume
95492	45	Penta	X - Excavated Reject	Osmose	Full Excavate-External Treatment
95505	45	Penta	X - Excavated Reject	Osmose	Full Excavate-External Treatment
95632	45	Penta	BX - Sound & Bore Reject	Osmose	Full Excavate-External Treatment
95706	30	Penta	X - Excavated Reject	Osmose	Full Excavate-External Treatment
95805	45	Penta	TX - External Treat Reject	Osmose	Full Excavate-MITC Fume External Treatment
95868	35	Penta	X - Excavated Reject	Osmose	Full Excavate-External Treatment
95881	45	Penta	X - Excavated Reject	Osmose	Full Excavate-External Treatment Internal Treat MITC Fume
95889	45	Penta	X - Excavated Reject	Osmose	Full Excavate-External Treatment