



ST. CHARLES
SINCE 1834

AGENDA ITEM EXECUTIVE SUMMARY

Title:	Recommendation to award contract for Cable Injection Services to Novinium
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Presenter:	Tom Bruhl
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Please check appropriate box:

Government Operations	<input checked="" type="checkbox"/>	Government Services 04.22.13
Planning & Development	<input type="checkbox"/>	City Council
Public Hearing	<input type="checkbox"/>	

Estimated Cost:	\$150,000	Budgeted:	<input checked="" type="checkbox"/> YES	<input checked="" type="checkbox"/> X	<input type="checkbox"/> NO	
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If NO, please explain how item will be funded:

Executive Summary:

In 2011, the City solicited bids for cable injection services. Novinium was the low bidder and offered the City the option of a three-year agreement where the costs per foot in the second and third year of the deal would decline. Through a combination of reduced cost of material per foot, and crew productivity gains based on experience with the process, our average cost per foot for cable injection has reduced from \$7.59 in our first year, to \$4.44 in 2012. Novinium has been an excellent vendor and their product is performing as expected. Cable injection allows the City to restore underground cables to “like new” condition for approximately half of the cost of replacing the cable. Another advantage of cable injection, when compared to cable replacement, is that it causes far less landscape damage to the yards of our residents. A subdivision prioritization matrix has been established. The attachment shows the list of subdivisions that we estimate will be completed this fiscal year. The City is on schedule with regard to the detailed plan that was put together in 2011.

Attachments: *(please list)*

Subdivision cable replacement matrix

Recommendation / Suggested Action *(briefly explain):*

Recommendation to award contract to Novinium for Cable Injection Services in an amount not to exceed \$150,000.

For office use only:

Agenda Item Number: 4.e

Subdivision	Year of Install	Fault Rate	Tan/Delta Rating	Cable Age	Customer Impact Rating	Replace Costs	Total Customer Affected	Notes	Cable Footage	Priority Totals	Rank
Thornley on the Fox Unit 1 - Thornhill Lane	1980	1	☠	1	1	\$40,599	34	Approximately 2332 ft. of direct buried cable, 561701 to 5623702	2337	3	1
Long Meadow of Fox	1977	0	1	1	1	\$35,162	44	Complete direct bury 2204 ft. 4423701 to 4421501; 4424701 to 4424702; 4413704 to 4412702	2024	3	2
Delnor Park	1972	1	0	1	2	\$8,773	22	Directional Bore New Cable & Conduit stringing in the pool. 4468702 to 4467701 => 464 ft.	505	4	3
Aintree - fault 2010	1976	0	☠	1	1	\$140,177	84	In Process Total Direct Buried 8,000 ft. Reconfigure residential loops 3682701 to 3692702 reconfig. Remove transformer 3692701 & install splice box secondary. 3567701 to 3568701 under road 3671701 to 3673801 splice box 3578702 to 3589702 under road	8069	2	4
Persimmon Fields	1979	1	☠	1	1	\$124,351	55	Complete Direct Buried Cable 4455501 to 4457702 => 800 ft. 4455501 to 4446701 => 2100 ft.	7158	3	5
Rolling Hill Manor Section 3	1969	1	☠	1	1	\$38,480	44	In Process Need to complete direct bury cable in Rolling Hills Manor --	2215	3	6
Rolling Hill Manor Section 4	1971	1	☠	1	1	\$34,970	37	3262501 to 3199701 => 2900'	2013	3	6
Rolling Hill Manor Section 6	1971	1	1	1	1	\$32,174	27	3199701 to 3262501 => 3000'	1852	4	6
Cambridge East - Unit 1	1978	0	2	1	1	\$16,139	47	Complete Direct Buried Cable 3262501 to 3253701 => 700 ft. 3254701 to 3254702 => 200 ft.	929	1	7
Cambridge East - Unit 2	1981	0	2	1	1	\$22,254	45	Mostly New Cable in Conduit Piggyback direct buried cable with cable in Cambridge East 1 3262501 to 3252702 => 1200 ft.	1281	4	7
Wildrose Springs - Phase 1	1980	2	2	1	1	\$47,322	44	In Process Total Direct Buried Cable from 5552501 to 5551501 => 2800 ft.	2724	6	8
Hunters Fields Unit 1A	1985	2	2	2	1	\$16,122	22	Total Direct Buried Cable from 4416701 to 3498701 => 950 ft.	928	7	9
Hunters Fields Commons - Dover Lane & Derby Course	1986	2	3	4	1	N/A	61	New Duct/New Cable => 1997	©	10	10

New Cable in Conduit	Total Cable Injected in 2012	Excavate Splices & Complete Cable Injection	Percent Complete
852 planned, (1) 5045701-5097701	1485	1515 planned, (2) 5063701-5064702 5065701-5063701	64%
2024 ft. duct & 1/0 cable installed (4) 4423701-4424701 4424701-4424702 4413704-4412702 4413702-4413703	No Injection. Directional Bore New 1/0 Cable in Conduit Only	DONE	100%
COMPLETE	505	595 planned, (1) 4468702-4469701	100%
1904 ft. duct & 1/0 cable installed (4) 3576801-3577701 3566801-3567701 3568701-3569701 3569701-3679701 4888 planned, (6) 3567701-3568701 3671701-3673801 3682701-3682702 3682702-3680702 3589702-3578702	414	N/A	29%
622 ft. duct & 1/0 cable installed (1) 4466702-4457701	6536	DONE	100%
5344 planned, (7) 3262501-3262701 3262701-3261702 3271702-3179701 3291702-3199701 3281701-3281702 3189701-3189702 3272701-3262501	258 1675 575	538 planned, (2) 3189701-3189701 3272701-3272702	12% 83% 31%
504 planned, (2) 3254701-3254702 3253701-3263701	423	N/A	46%
683 planned, (1) 3262501-3261701	598	N/A	47%
2237 planned, (4) 5563701-5563702 5561702-5551702 5553701-5554801 5551701-5555801	1504	2237 planned, (1) 5562701-5562703	55%
COMPLETE	928	DONE	100%
N/A	N/A	N/A	☑

Subdivision	Year of Install	Fault Rate	Tan/Delta Rating	Cable Age	Customer Impact Rating	Replace Costs	Total Customer Affected	Notes	Cable Footage	Priority Totals	Rank
Hunters Fields Unit 1	1985	2	2	2	1	\$27,083	52	Total Direct Buried Cable from 3465501 to 3459501 => 2450 ft. 3465501 to 3477701 => 850 ft.	1559	7	9
Milburn Unit #5	1969	2	3	1	1	\$47,861	42	Total Direct Buried Cable from 5283001 to 5293000 => 2700 ft. Reconfigured the NO out-of-0	2755	7	10
Fox Glade PUD - Unit 1	1971	2	2	1	1	\$30,176	17	Total Direct Buried Cable from 4178P02 to 4178P04 => 1700 ft.	1737	4	11
Prairie View Addition - Primary Cable is #2 Cu.	1972	2	3	1	1	\$16,278	16	Total Direct Buried Cable from 5241P03 to 5139P04 => 1100 ft.	937	7	12
Evergreen Addition	1976	2	3	1	2	\$11,500	8	Complete Direct Buried Cable: 5381P02 to 5288P06 => 700'	662	8	13
Marshall's Addition	1976	2	3	1	2	\$11,848	11	Complete Direct Buried Cable: 5362T04 to 5552P01 => 700'	682	8	14
CMD Stern 3Ø	1986	0	3	2	2	\$93,704	27	(27) Three-Phase Customers Approximately 300 ft. of Direct Buried Cable to replace	9909	7	15
Hunters Fields Unit 2	1986	2	3	2	1	\$35,422	50	Total Direct Buried Cable from 3465501 to 3477701 => 1250 ft.	2039	8	9
Hunters Fields Unit 4	1986	2	3	2	2	\$18,415	22	Total Direct Buried Cable from 3498T01 to 3495T01 => 1100 ft.	1060	9	9
Cambridge East - Unit 3	1985	2	2	2	2	\$18,693	28	Cambridge East Units 3 & 4 Complete Direct Buried Cable	1076	8	7
Cambridge East - Unit 4	1985	2	2	2	2	\$4,117	14	3252T02 to 3149T01 => 1400 ft. 3253T01 to 3252T02 => 300 ft.	237	8	7
Larson/Ronzheimer - July 20, 2011 - Cable Fault	1984	2	2	2	2	See Below	33	Cable Failure on 7/20/2011 Total Direct Buried => 5950 ft. See Cambridge East 5, 6, & 7.	4611	8	7
Cambridge East - Unit 5	1985	2	2	2	2	\$15,983	29	Complete Direct Buried Cable	920	8	7
Cambridge East - Unit 6	1986	2	2	2	2	\$20,090	27	323501 to 3252T01 => 2300'	1153	8	7
Cambridge East - Unit 7	1986	2	2	2	2	\$44,091	28	323501 to 3149T01 => 2850'	2538	8	7
Cambridge East - Unit 8	1986	2	3	2	1	\$21,229	24	Complete Direct Buried Cable 3255T02 to 3254T02 => 2250 ft.	1222	8	7

New Cable in Conduit	Total Cable Injected in 2012	Execute Splices & Complete Cable Injection	Percent Complete
COMPLETE	1559	286 planned, (1) 3457T01-3457T02	100%
667 planned, (2) 5282T02-5281T01 5283T01-5293P04	2088	at 5285P05 moved top down to CP clear N.O. out-of-0	76%
1737 planned, (4) 4178P04-4178T01 4178T01-4177T01 4177T01-4167T01 4167T01-4178P02	No Injection. Directional Bore New 1/0 Cable in Conduit Only	N/A	0%
565 planned, (2) 5149T01-524T03 523T01-5139P04	372		40%
662 planned, (3) 5288T06-5288T04 5288T04-5284T01 538T01-5381P02	No Injection. Directional Bore New 1/0 Cable in Conduit Only	N/A	0%
597 planned, (2) 5352T01-5362T03 5362T05-5362T04	185	N/A	27%
9909 ft. duct & 4/0 cable installed (6). 2298T01-2288T02 3228T02-3218T01 3218T01-3218T02 2267T02-2257T02 2247T01-2247T01	No Injection. Directional Bore New 3Ø Cable in Conduit Only	DONE	100%
COMPLETE	2039	DONE	100%
COMPLETE	1060	DONE	100%
COMPLETE	1076	DONE	100%
COMPLETE	237	DONE	100%
COMPLETE	see Cambridge East Unit 5-7	DONE	100%
COMPLETE	920	DONE	100%
COMPLETE	1153	DONE	100%
COMPLETE	2538	DONE	100%
COMPLETE	1222	DONE	100%

38086

52315

52929

Subdivision	Year of Install	Fault Rate	Tan/Delta Rating	Cable Age	Customer Impact Rating	Replace Costs	Total Customer Affected	Notes	Cable Footage	Priority Totals	Rank	New Cable in Conduit	Total Cable Injected in 2012	Excavate Splices & Complete Cable Injection	Percent Complete
Delnor Woods Medical Complex & Pineview Nursing Home 3Ø	1973	2	3	5	2	N/A	8	Replaced in 2011 lightning hit on 7/23/11. (8) 3Ø customers. New Cable in Conduit => 2011	©	12	12	N/A	N/A	N/A	100%
CMD - Stone/Dukane 3Ø	1974	0	3	5	2	N/A	11	(11) Three-Phase customers, New Cable in Conduit => 2007	©	10	10	N/A	N/A	N/A	100%
Manor Houses - Unit 1, 2, & 3 at Whittington Course	1979	0	3	5	1	N/A	122	Investigate - Completed 2008! GIS => new cable in conduit.	©	9	9	N/A	N/A	N/A	100%
Chandler	1979	2	3	5	2	N/A	27	New Cable in Conduit => 2009	©	12	12	N/A	N/A	N/A	100%
Thompson Middle School	1994	0	3	5	2	N/A	1	New Cable in Conduit => 2010	©	10	10	N/A	N/A	N/A	100%
Randalwood Medical 3Ø	1983	3	3	2	1	\$23,348	4	(4) 3-Phase customers, Need to inject/replace 423' of direct buried cable 6432T01-6339S02	2469	9	15	No Injection. Directional Bore New 3Ø Cable in Conduit Only	N/A	N/A	25%
Wildrose Springs - Phase 3	1987	3	1	3	1	\$66,849	37	Complete with Wildrose #1 (E)5551501 to 5467T02 => 1500 (W)5551501 - 5467T02 => 1200	3848	8	8	1535 planned, (3) 5561T01-5554B02 5469T02-5554B01 5467T01-5467T02	448 planned, (0) 5469T02-5469T03	60%	
Hunter Woods	1988	3	3	3	0	\$59,917	33	Complete Direct Buried Cable: 3581501 to 3584501 => 3800'	3449	9	16	COMPLETE	DONE	DONE	100%
Woods of Fox Glen 1	1988	2	3	3	1	\$130,258	51	(W)4736501 to 4736501 => 4500' (E) 4736501 to 4736501 => 3000'	7498	9	17	COMPLETE	488 planned, (0) 4737T01-4738T01	100%	
Royal St. James & Durham Woods	1989	2	3	3	1	\$100,360	49	Complete Direct Buried Cable 3633501 to 3538501 => 5500 ft.	5777	9	18	859 planned, (2) 3539T01-3539T02 3633T01-3539T01	922	993 planned, (0) 3633S01-3611T01	16%
Cambridge East - Unit 9	1987	3	2	3	1	\$61,533	57	Complete Direct Buried Cable 3168501 to 3148T01 => 2300 ft. 3167501 to 3157T03 => 250 ft.	3542	9	19	Fence impairs completion of span 3167S01-3157T01	3428	418 planned, (0) 3158T01-3169T01	97%
Cambridge East - Unit 10	1987	3	2	3	1	\$17,998	32	Complete Direct Buried Cable 3148T01 to 3148T01 => 600 ft.	1036	9	19	COMPLETE	DONE	DONE	100%
Cambridge East - Unit 11	1987	3	2	3	1	\$48,260	47	Complete Direct Buried Cable 3129501 to 3130T03 => 1400 ft. 3129501 to 3138T01 => 1400 ft.	2778	9	19	644 planned, (1) 3138T03-3128T01	2209		80%
Royal Fox ReSub 205	1988	3	3	3	0	\$82,692	39	Complete Direct Buried Cable 2694501 to 2694501 => 4800 ft. Reconfigure N.O. out-of-phase	4760	9	20	569 planned, (0) 3615T02-2694S02 Reconfigure N.O. to remove Out-of-Ø			0%
Royal Fox ReSub 206	1988	3	3	3	0	\$93,255	69	Complete Direct Buried Cable 2792T01 to 2795S01 => 750 ft. 2791S01 to 2785S01 => 3700 ft.	5368	9	20	1136 planned, (0) 2782T01-2785T02 488 existing duct	4232		79%
The Royal Fox	1988	3	3	3	0	\$107,639	74	Complete Direct Buried Cable 2694502 to 3517501 => 3500 ft.	6196	9	20				0%
Royal Fox Country Club	1988	3	3	3	0	\$201,814	232	Complete Direct Buried Cable: (E)2774501 to 2694502 => 6000' (W)2774501 to 2694502 => 6000'	11617	9	20				0%
TOTAL DISTRIBUTION CABLE IMPROVEMENTS - INJECTION & REPLACEMENT @ 2012												17945	54437	75382	33%

Subdivision	Year of Install	Fault Rate	Tan/Delta Rating	Cable Age	Customer Impact Rating	Replace Costs	Total Customer Affected	Notes	Cable Footage	Priority Totals	Rank	New Cable in Conduit	Total Cable Injected in 2012	Excess Splices & Complete Cable Injection	Percent Complete
Kehoe's Heath Park	1989	3	3	3	0	\$66,484	61	Complete Direct Buried Cable: 5254P01 to 5273P02 => 3800 ft.	3827	9	20				
Wildwood Estates	1989	2	3	2	2	\$22,549	16	Total Direct Buried Cable from 6414P01 to 12kV Elbow Modul at 2030 Thornwood Cir. 1300 ft.	1298	9	20				0%
Charlemagne Phase 1	1989	3	3	3	0	\$125,724	171	(N)2592S02 to 2592S02 => 6400' (S)2592S02 to 2479T02 => 4400'	7247	9	20	1017 ft duct install and 1/0 cable (2), 3513T01-3514T01 2583T01-2593S01			14%
Charlemagne Phase 2	1989	3	3	3	0	\$62,957	122	(N)2592S02 to 2592S02 => 6400' (S)2592S02 to 2479T02 => 4400'	3624	9	20	134645			0%
Hunt Club	1989	3	3	3	0	\$111,947	94	4431S01 to 4421S01 => 4700 ft. 4421S01 to 4424T01 => 1200 ft. 4436S01 to 4445T01 => 1800 ft. 4436S01 to 4446T01 => 1100 ft.	6444	9	20				0%
Hunt Club 2	1990	3	3	3	0	\$297,710	184	3499S01 to 4436S01 => 6700 ft. 3584S01 to 3576S01 => 3400 ft. 3499S01 to 4436S01 => 7400 ft.	17187	9	20	156246			0%
Sutton Place	1989	2	3	3	2	\$20,065	11	Complete Direct Buried Cable with The Hunt Club 1100 ft.	1155	10	20				0%
Mediapolis Addition	1990	3	3	3	1	\$27,587	27	Complete Direct Buried Cable: 4174P03 to 4173T01 => 1600 ft.	1588	10	20				0%
Wildrose Springs - Phase 2	1986	2	3	3	2	N/A	77	Cable in Conduit	C	10	15	Cable in Conduit	N/A	N/A	0%
Covington Court	1987	3	3	3	0	N/A	174	Cable in Conduit	C	9	15	Cable in Conduit	N/A	N/A	0%
CMD - 37th 3Ø	1987	2	3	3	2	\$12,114	12	(27) Three-Phase Customers	1281	10	20				0%
CMD - 38th 3Ø	1987	2	3	3	2	\$3,868	15	Approximately 569 ft. of Direct Buried Cable to replace - part of Eckrich Reinforcement job.	409	10	20	162859	1688 planned, (3) 2387T01-2387T02 2377S01-2377S02 2382S01-2383M02		0%
Red Gate Unit 1	1988	3	3	3	1	\$67,544	31	Complete w/ Red Gate Unit 3 5647S01 to 5647S01 => 7500 ft.	3888	10	20				0%
Willowgate	1988	3	3	3	1	N/A	40	Cable in Conduit	C	10	15	Cable in Conduit	N/A	N/A	0%
Red Gate Unit 3	1989	3	3	3	1	\$62,610	32	Complete w/ Red Gate Unit 1 5647S01 to 5647S01 => 7500 ft.	3604	10	20	170351			0%
CMD-Unit 1 - Wallace 3Ø (RRD)	1989	3	3	3	2	N/A	4	(4) Three-Phase customers, Cable in Conduit	C	11	15	Cable in Conduit	N/A	N/A	0%
Woods of Fox Glen 2	1990	3	3	3	1	\$169,154	44	Includes Woods of Fox Glen 3 (N)4715S01 to 4715S01 => 4883' (S) 4715S01 to 4715S01 => 4873'	9737	10	20				0%
CMD - Ohio 3Ø	1990	3	3	3	1	N/A	37	3-Phase Cable in Conduit	C	10	15	Cable in Conduit	N/A	N/A	0%
Charlestowne Mall 3Ø	1990	3	3	3	2	N/A	11	3-Phase Cable in Conduit	C	11	15	Cable in Conduit	N/A	N/A	0%
Hunt Club Unit 3	1991	2	3	4	1	\$33,199	27	4436S01 to 4426T02 => 950 ft. 4427T01 to 4416T01 => 1000 ft.	1011	10	20	181999			0%

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Pomeroy Ct. East of 7th Ave	1991	3	3	4	1	\$12,543	33	Only 10' transformer w/650 ft. 4117P04 to 3198P02 => 650 ft.	722	11	20				0%
Red Gate Unit 2	1991	3	3	4	1	\$12,282	27	Includes Red Gate Unit 2, 4 & 8	707	11	20				0%
Red Gate Unit 4	1991	3	3	4	1	\$31,062	37	5656S01 to 5764S01 => 4900 ft.	1788	11	20				0%
Walnut Hill	1991	2	3	4	0	N/A	194	New Cable in Conduit	0	9	20	Cable in Conduit	N/A	N/A	100%
Townes of Fox Chase - Waverly Circle	1992	2	3	4	1	N/A	77	New Cable in Conduit	0	10	20	Cable in Conduit	N/A	N/A	100%
Viewpointe	1992	3	3	4	0	N/A	55	New Cable in Conduit	0	10	20	Cable in Conduit	N/A	N/A	100%
Fox Meadow Estates	1992	3	3	4	1	\$18,797	17	Complete Direct Buried Cable: 5386P02 to 5386P06 => 1082 ft.	1082	11	20				0%
Red Gate Unit 5	1993	3	3	4	1	\$40,008	22	Red Gate 5, 6 & 7 completed together-several spans in duct	2303	11	20				0%
Red Gate Unit 6	1993	3	3	4	1	\$61,098	36	5779S01 to 5764S01 => 6000 ft.	3517	11	20				0%
Red Gate Unit 7	1993	3	3	4	1	\$42,336	37	5764S01 to 5777T01 => 1600 ft.	2437	11	20				0%
Kingswood	1994	3	3	4	1	\$182,079	171	Kingswood 1, 2 & 3 together	10451	11	20				0%
Kingswood #2	1994	3	3	4	1	\$72,755	78	2569S01 to 2556S02 => 4800 ft.	4188	11	20				0%
Kingswood #3	1994	3	3	4	1	\$33,650	55	2556S02 to 2552S01 => 2200 ft.	1937	11	20				0%
Renaux Manor - Unit 1	1997	3	3	4	1	\$69,368	64	Check for Direct Buried Cable: 7335S01 to 7441S01 => 2060 ft.	3993	11	20				0%
Kirkland Center of Cumberland Green	1994	3	3	4	2	\$19,249	11	7337T01 to 7348T03 => 1933 ft.	1108	12	20				0%
Westfield Park - Davis	1997	3	3	4	2	\$24,043	22	3126S01 to 3127T04 => 1108' buried cable of vintage 1994	1884	12	20				0%
Red Gate Unit 8	1994	3	3	4	2	\$37,020	7	Complete Direct Buried Cable: 5149P02 to 5157T02 => 1300 ft.	2131	12	20				0%
Tradition of St. Charles	1997	3	3	4	2	N/A	28	See Red Gate Units 2 & 4	0	12	20	Cable in Conduit	N/A	N/A	100%
Oak Crest - Unit 1	1997	3	3	4	2	N/A	31	New Cable in Conduit => 1997	0	12	20	Cable in Conduit	N/A	N/A	100%
Renaux Manor Unit 2	1997	3	3	4	1	N/A	88	New Cable in Conduit => 1997	0	11	20	Cable in Conduit	N/A	N/A	100%
Townes of Renaux Manor Unit 1	1997	3	3	4	1	N/A	92	New Cable in Conduit => 1997	0	11	20	Cable in Conduit	N/A	N/A	100%
Harvest Hills Unit 1	1997	3	3	4	0	N/A	196	New Duct/New Cable => 1997	0	10	20	Cable in Conduit	N/A	N/A	100%
Renaux Manor Unit 1 P	1998	3	3	4	1	N/A	71	New Duct/New Cable => 1998	0	11	20	Cable in Conduit	N/A	N/A	100%
Harvest Hills Unit 2	1998	3	3	4	0	N/A	173	New Cable in Conduit => 1998	0	10	20	Cable in Conduit	N/A	N/A	100%
Meijer 30	1998	3	3	4	2	N/A	7	(A) 3-Phase and (3) 1-Phase customers, Cable in Conduit	0	12	20	Cable in Conduit	N/A	N/A	100%
Amli 30	1998	3	3	4	2	N/A	24	(24) 3-Phase customers, Cable in conduit => 1998	0	12	20	Cable in Conduit	N/A	N/A	100%
Majestic Oaks	1999	3	3	4	0	N/A	141	New Cable in Conduit => 1999	0	10	20	Cable in Conduit	N/A	N/A	100%
Stuarts Crossing	1999	3	3	4	0	N/A	131	New Cable in Conduit => 1999	0	10	20	Cable in Conduit	N/A	N/A	100%

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Oak Crest - Unit 2	1999	3	3	4	2	N/A	30	New Cable in Conduit => 1999	0	12	33
Reneaux Manor Unit 3	1999	3	3	4	0	N/A	117	New Duct/New Cable => 1999	0	10	33
Townes of Reneaux Manor Unit 2	1999	3	3	4	0	N/A	151	New Duct/New Cable => 1999	0	10	32
Shannah Industrial Park - Commerce Drive 30	1999	3	3	4	2	N/A	15	New Duct/New Cable => 1999	0	12	32
Rivers Edge	2000	3	3	4	1	N/A	77	New Duct/New Cable => 2000	0	11	32
Main Street Commons - Steinmart 30	2000	3	3	4	2	N/A	2	New Duct/New Cable => 2000	0	12	32
Sidwell	2000	3	3	4	2	N/A	9	New Duct/New Cable => 2000	0	12	32
Artesian Springs	2001	3	3	4	2	N/A	24	New Duct/New Cable => 2001	0	12	32
Harvest Hills Unit 3	2001	3	3	4	0	N/A	144	New Duct/New Cable => 2001	0	10	32
Harvest Hills Unit 4	2001	3	3	4	0	N/A	96	New Duct/New Cable => 2001	0	10	32
Randall Road Commercial 30 Properties - Wendys	2001	3	3	4	2	N/A	6	New Duct/New Cable => 2001	0	12	32
Eastgate	2001	3	3	4	2	N/A	12	New Duct/New Cable => 2001	0	12	32
Pheasant Run Trails	2002	3	3	5	2	N/A	2	New Duct/New Cable => 2002	0	13	32
Tincup Pass	2002	3	3	5	2	N/A	2	Bore New Duct/New Cable due to age => (1970)	0	13	32
Surrey Hill Apartments	2002	3	3	5	2	N/A	12	Bore New Duct/New Cable due to age => (1970)	0	13	32
East High - South portion	2002	3	3	5	1	N/A	84	New Duct/New Cable => 2002	0	12	32
Westfield Park	2002	3	3	5	0	N/A	193	Bore New Duct/New Cable due to age => (1965)	0	11	32
Richard Thorsh's Lilac	2002	3	3	5	2	N/A	16	Bore New Duct/New Cable due to age => (1965)	0	13	32
Milburn	2002	3	3	5	1	N/A	44	Bore New Duct/New Cable due to age => (1965)	0	12	32
Kehoe	2002	3	3	5	2	N/A	22	Bore New Duct/New Cable due to age => (1965)	0	13	32
Jean's Addition	2002	3	3	5	2	N/A	14	Bore New Duct/New Cable due to age => (1965)	0	13	32
CMD St. Charles Industrial Unit 2 30	2002	3	3	5	2	N/A	4	Bore - New Cable - Production Dr. east of Stone L715 upgrade	0	13	32
Aintree - Highgate Course	2002	3	3	5	1	N/A	55	New Cable & Conduit => 2002	0	12	32
Remington Glen	2003	3	3	5	0	N/A	105	New Duct/New Cable => 2003	0	11	32
Rolling Hills Manor Section 2 Forest/Pleasant Ave	2003	3	3	5	1	N/A	52	Reconctoring New Duct & New Cable => 2003	0	12	32
Buckhorn - 15th St. & Brook	2003	3	3	5	1	N/A	38	Bore - New Cable & Conduit due to age => (1971)	0	12	32
Siegels	2003	3	3	5	2	N/A	2	New Duct/Cable - of Randall Crossing New Busines => 2003	0	13	32

Subdivision	Year of Install	Fault Rate	Tan/Delta Rating	Cable Age	Customer Impact Rating	Replace Costs	Total Customer Affected	Notes	Cable Footage	Priority Totals	Rank
Oak Crest - Unit 2	1999	3	3	4	2	N/A	30	New Cable in Conduit => 1999	0	12	33
Reneaux Manor Unit 3	1999	3	3	4	0	N/A	117	New Duct/New Cable => 1999	0	10	33
Townes of Reneaux Manor Unit 2	1999	3	3	4	0	N/A	151	New Duct/New Cable => 1999	0	10	32
Shannah Industrial Park - Commerce Drive 30	1999	3	3	4	2	N/A	15	New Duct/New Cable => 1999	0	12	32
Rivers Edge	2000	3	3	4	1	N/A	77	New Duct/New Cable => 2000	0	11	32
Main Street Commons - Steinmart 30	2000	3	3	4	2	N/A	2	New Duct/New Cable => 2000	0	12	32
Sidwell	2000	3	3	4	2	N/A	9	New Duct/New Cable => 2000	0	12	32
Artesian Springs	2001	3	3	4	2	N/A	24	New Duct/New Cable => 2001	0	12	32
Harvest Hills Unit 3	2001	3	3	4	0	N/A	144	New Duct/New Cable => 2001	0	10	32
Harvest Hills Unit 4	2001	3	3	4	0	N/A	96	New Duct/New Cable => 2001	0	10	32
Randall Road Commercial 30 Properties - Wendys	2001	3	3	4	2	N/A	6	New Duct/New Cable => 2001	0	12	32
Eastgate	2001	3	3	4	2	N/A	12	New Duct/New Cable => 2001	0	12	32
Pheasant Run Trails	2002	3	3	5	2	N/A	2	New Duct/New Cable => 2002	0	13	32
Tincup Pass	2002	3	3	5	2	N/A	2	Bore New Duct/New Cable due to age => (1970)	0	13	32
Surrey Hill Apartments	2002	3	3	5	2	N/A	12	Bore New Duct/New Cable due to age => (1970)	0	13	32
East High - South portion	2002	3	3	5	1	N/A	84	New Duct/New Cable => 2002	0	12	32
Westfield Park	2002	3	3	5	0	N/A	193	Bore New Duct/New Cable due to age => (1965)	0	11	32
Richard Thorsh's Lilac	2002	3	3	5	2	N/A	16	Bore New Duct/New Cable due to age => (1965)	0	13	32
Milburn	2002	3	3	5	1	N/A	44	Bore New Duct/New Cable due to age => (1965)	0	12	32
Kehoe	2002	3	3	5	2	N/A	22	Bore New Duct/New Cable due to age => (1965)	0	13	32
Jean's Addition	2002	3	3	5	2	N/A	14	Bore New Duct/New Cable due to age => (1965)	0	13	32
CMD St. Charles Industrial Unit 2 30	2002	3	3	5	2	N/A	4	Bore - New Cable - Production Dr. east of Stone L715 upgrade	0	13	32
Aintree - Highgate Course	2002	3	3	5	1	N/A	55	New Cable & Conduit => 2002	0	12	32
Remington Glen	2003	3	3	5	0	N/A	105	New Duct/New Cable => 2003	0	11	32
Rolling Hills Manor Section 2 Forest/Pleasant Ave	2003	3	3	5	1	N/A	52	Reconctoring New Duct & New Cable => 2003	0	12	32
Buckhorn - 15th St. & Brook	2003	3	3	5	1	N/A	38	Bore - New Cable & Conduit due to age => (1971)	0	12	32
Siegels	2003	3	3	5	2	N/A	2	New Duct/Cable - of Randall Crossing New Busines => 2003	0	13	32

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Randall Road Commercial 30 Properties - Wendys	2001	3	3	4	2	N/A	6	New Duct/New Cable => 2001	0	12	32
Eastgate	2001	3	3	4	2	N/A	12	New Duct/New Cable => 2001	0	12	32
Pheasant Run Trails	2002	3	3	5	2	N/A	2	New Duct/New Cable => 2002	0	13	32
Tincup Pass	2002	3	3	5	2	N/A	2	Bore New Duct/New Cable due to age => (1970)	0	13	32
Surrey Hill Apartments	2002	3	3	5	2	N/A	12	Bore New Duct/New Cable due to age => (1970)	0	13	32
East High - South portion	2002	3	3	5	1	N/A	84	New Duct/New Cable => 2002	0	12	32
Westfield Park	2002	3	3	5	0	N/A	193	Bore New Duct/New Cable due to age => (1965)	0	11	32
Richard Thorsh's Lilac	2002	3	3	5	2	N/A	16	Bore New Duct/New Cable due to age => (1965)	0	13	32
Milburn	2002	3	3	5	1	N/A	44	Bore New Duct/New Cable due to age => (1965)	0	12	32
Kehoe	2002	3	3	5	2	N/A	22	Bore New Duct/New Cable due to age => (1965)	0	13	32
Jean's Addition	2002	3	3	5	2	N/A	14	Bore New Duct/New Cable due to age => (1965)	0	13	32
CMD St. Charles Industrial Unit 2 30	2002	3	3	5	2	N/A	4	Bore - New Cable - Production Dr. east of Stone L715 upgrade	0	13	32
Aintree - Highgate Course	2002	3	3	5	1	N/A	55	New Cable & Conduit => 2002	0	12	32
Remington Glen	2003	3	3	5	0	N/A	105	New Duct/New Cable => 2003	0	11	32
Rolling Hills Manor Section 2 Forest/Pleasant Ave	2003	3	3	5	1	N/A	52	Reconctoring New Duct & New Cable => 2003	0	12	32
Buckhorn - 15th St. & Brook	2003	3	3	5	1	N/A	38	Bore - New Cable & Conduit due to age => (1971)	0	12	32
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Subdivision	Year of Install	Fault Rate	Tan/Delta Rating	Cable Age	Customer Impact Rating	Replace Costs	Total Customer Affected	Notes	Cable Footage	Priority Totals	Rank
Stonewood Estates	1980	0	0	1	1	\$32,000	18	Piggyback inject/replacement cable with Persimmon Woods	1777	2	5
Hunter's Woods #1 - Southgate	1972	0	☠	1	1	\$56,506	37	Need to complete direct bury 3561501 to 3543701 => 2500' 3565701 to 3545701 => 1300' 3566501 to 3565701 in conduit	2455	2	6
Chasse Circle splice failure - July 19, 2011 Hunters Woods	1977	0	☠	1	1	\$35,688	32	Splice Failure on 7/19/2011 3561501 to 3564701 => 1600' 3566501 to 3564701 => 800' 3554702 to 3554703 in conduit See Hunters Woods #1 & #2.	1737	2	6
Hunter's Woods #2 - Chasse	1977	0	☠	1	1	\$13,532	32	910' of Direct Buried on Chasse Circle. See above Hunters Woods #1 and #2.	3952	2	6
Thornley - Edgewild Ct.	1980	1	☠	1	1	See Above	11	TD Test Required Injecting Cable => 5625701 to 5625702	1717	3	7
Hunter's Woods #3 - Dunham Pl. Mainline 30 3561501 to 3544501	1979	2	1	1	1	\$55,763	48	3459501 to 3551701 => 750' 3561501 to 3551701 => 500' 3561501 to 3499701 => 2200' 3459501 to 3469701 => 1250' Piggyback injection/replacement cable with Hunters Woods #1 & 2	3822	5	10
Thornley on the Fox Unit 2 - Greenwillow Lane	1985	3	3	2	2	\$32,714	19	Total Direct Buried Cable from 5616701 to 5616701 => 2200 ft. Finish with Thornley on the Fox Unit 1, if desired.	1954	10	20
Hunters Fields Unit 3	1986	2	3	2	1	\$10,409	34	Total Direct Buried Cable from 3496701 to 3496701 => 500 ft.	1177	8	10

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Subdivision	Year of Install	Fault Rate	Tan/Delta Rating	Cable Age	Customer Impact Rating	Replace Costs	Total Customer Affected	Notes	Cable Footage	Priority Totals	Rank
Stonewood Estates	1980	0	0	1	1	\$32,000	18	Piggyback inject/replacement cable with Persimmon Woods	1777	2	5
Hunter's Woods #1 - Southgate	1972	0	☠	1	1	\$56,506	37	Need to complete direct bury 3561501 to 3543701 => 2500' 3565701 to 3545701 => 1300' 3566501 to 3565701 in conduit	2455	2	6
Chasse Circle splice failure - July 19, 2011 Hunters Woods	1977	0	☠	1	1	\$35,688	32	Splice Failure on 7/19/2011 3561501 to 3564701 => 1600' 3566501 to 3564701 => 800' 3554702 to 3554703 in conduit See Hunters Woods #1 & #2.	1737	2	6
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Thornley - Edgewild Ct.	1980	1	☠	1	1	See Above	11	TD Test Required Injecting Cable => 5625701 to 5625702	1717	3	7
Hunter's Woods #3 - Dunham Pl. Mainline 30 3561501 to 3544501	1979	2	1	1	1	\$55,763	48	3459501 to 3551701 => 750' 3561501 to 3551701 => 500' 3561501 to 3499701 => 2200' 3459501 to 3469701 => 1250' Piggyback injection/replacement cable with Hunters Woods #1 & 2	3822	5	10
Thornley on the Fox Unit 2 - Greenwillow Lane	1985	3	3	2	2	\$32,714	19	Total Direct Buried Cable from 5616701 to 5616701 => 2200 ft. Finish with Thornley on the Fox Unit 1, if desired.	1954	10	20
Hunters Fields Unit 3	1986	2	3	2	1	\$10,409	34	Total Direct Buried Cable from 3496701 to 3496701 => 500 ft.	1177	8	10

Age Impact Rating	Previous Fault Rating	Customer Impact Rating	Tan Delta Test Rating
1 = 30+ years old	0 = Multiple Cable Faults	0 = Critical Customers Served or High Total Number of Customers Affected	☠ = 0 = Tan Delta test was shut down prematurely to prevent an imminent cable failure
2 = 25 - 30 years old	2 = 1 Known Cable Fault	1 = Moderate Customer Count	1 = High Tan Delta Reading
3 = 20 - 25 years old	3 = No Cable Faults on Record	2 = Low Customer Count	2 = Above Normal Tan Delta
4 = 10 - 20 years old			3 = Good Tan Delta or N/A (No Test)
5 = 10 or less years old			

Replacement Cost for 1/0 = \$18.37 per foot (1Ø cable & 3" conduit)	\$17.37	Replacement Cost for 3-Phase 4/0 = \$28.37 per foot (3Ø cable 4/0 & 5" conduit)	\$28.37
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☠ => Cable Injection Completed and/or Directional Boring & Cable Replacement Scheduled and/or Completed