



ELECTRIC DEPARTMENT

2019 BUDGET PRESENTATION TO CITY COUNCIL

AUGUST 27, 2018

CAPITAL IMPROVEMENT PROJECTS (2019 - 2023)

**CITY OF NEWARK
CAPITAL IMPROVEMENTS PROGRAM 2019-2023
ELECTRIC FUND**

Project Number	Project Name	2018 Budget	2019		2019	2020	2021	2022	2023	TOTAL
			Reserves & Other Funding	Current Funding						
E1901	New Lines and Services	\$0	\$0	\$125,000	\$125,000	\$130,000	\$135,000	\$140,000	\$145,000	\$675,000
E1911	34kV Line 3202 Capacity Upgrade	0	0	0	0	0	250,000	250,000	0	500,000
E1912	35kV Disconnect Switches Replacement - Kershaw Substation	0	0	0	0	0	150,000	150,000	150,000	450,000
E1801	New Lines and Services	125,000	0	0	0	0	0	0	0	0
E1804	Spacer Cable Replacement	81,000	0	0	0	0	0	0	0	0
E1805	Line Extension - UD Farm	0	0	170,000	170,000	0	0	0	0	170,000
E1806	Christianstead Cable Addition	0	0	0	0	50,000	0	0	0	50,000
E1807	Relay Replacements - Kershaw Substation	0	0	0	0	50,000	50,000	50,000	50,000	200,000
E1808	Voltage Upgrade - North College Avenue	0	0	0	0	50,000	0	0	0	50,000
E1809	12.47kV Line Extension	0	0	100,000	100,000	0	0	0	0	100,000
E1810	Lightning Arrestor Replacement	0	0	0	0	0	0	0	235,000	235,000
E1602	Circuit Breaker Replacement	0	0	0	0	65,000	0	0	0	65,000
E1502	Underground Distribution - UD Star Campus	120,000	120,000	0	120,000	120,000	120,000	120,000	120,000	600,000
E1203	CAD Software	40,500	40,444	0	40,444	0	0	0	0	40,444
E1105	Upgrade Substation Transformers and Circuit Breakers	700,000	0	0	0	0	0	0	0	0
E0503	SCADA and Automatic Switching	300,000	0	655,000	655,000	250,000	0	450,000	0	1,355,000
EEQSF	Equipment Replacement Program	340,000	291,782	111,218	403,000	302,000	0	0	0	705,000
		<u>\$1,706,500</u>	<u>\$452,226</u>	<u>\$1,161,218</u>	<u>\$1,613,444</u>	<u>\$1,017,000</u>	<u>\$705,000</u>	<u>\$1,160,000</u>	<u>\$700,000</u>	<u>\$5,195,444</u>
	GROSS CAPITAL IMPROVEMENTS	\$1,706,500	\$452,226	\$1,161,218	\$1,613,444	\$1,017,000	\$705,000	\$1,160,000	\$700,000	\$5,195,444
	LESS: USE OF RESERVES	(40,500)	(40,444)	0	(40,444)	0	0	0	0	(40,444)
	VEHICLE/EQUIPMENT REPLACEMENT	(340,000)	(291,782)	0	(291,782)	(248,582)	0	0	0	(540,364)
	GRANTS	0	0	0	0	0	0	0	0	0
	BOND ISSUES	(381,000)	0	0	0	0	0	0	0	0
	OTHER FINANCING SOURCES	(120,000)	(120,000)	0	(120,000)	(120,000)	(120,000)	(120,000)	(120,000)	(600,000)
	NET CAPITAL IMPROVEMENTS	<u>\$825,000</u>	<u>\$0</u>	<u>\$1,161,218</u>	<u>\$1,161,218</u>	<u>\$648,418</u>	<u>\$585,000</u>	<u>\$1,040,000</u>	<u>\$580,000</u>	<u>\$4,014,636</u>



PROJECT NO: E1901
PROJECT TITLE: New Lines and Services
PROJECT STATUS: Reoccurring (with no end date)

FUNDING SUMMARY:
 NEW FUNDING: \$ 675,000
 CARRYOVER FUNDING: \$ -
 TOTAL FUNDING: \$ 675,000

CAPITAL BUDGET - PROJECT DETAIL	
DEPARTMENT:	Electric
DIVISION:	Electric
FUND:	Electric
PROJECT LOCATION:	Various location in the City
PROJECT PRIORITY:	1 - Highest Priority Level
	<i>Project underway and must be completed</i>
COMPREHENSIVE DEVELOPMENT PLANNING VISION ELEMENT:	Sustainable Community

§ 806.1(3) SUMMARY OF PROJECT DATA	
First Year in Program:	Perpetual
Est. Completion Date:	Perpetual
Est. Useful Life (in years):	30 Yrs.
Est. Total Cost:	\$ 800,000
Est. Spend @ 12/31/2018 (if underway) ¹ :	\$ 125,000
% Complete (if underway):	15.6%
Balance to be funded ¹ :	\$ 675,000

¹ For ongoing projects, we must estimate total spent since inception through current year to derive the balance to be funded thereafter.

PROJECT COST BY CATEGORY		
CLASSIFICATION	ACCOUNT NUMBER	AMOUNT
Labor:	5195106.9860	\$ 310,500
Materials:	5195106.9760	\$ 364,500
Other Contracts:		\$ -
TOTAL PROJECT COST		\$ 675,000

² Council is not required to authorize budget year funding for this portion, but this portion of the project will indeed represent a cash outflow in the budget year and/or "out years."

Charter § 806.1(2) DESCRIPTION & JUSTIFICATION:	
Installation of electric distribution lines in new developments. This includes both overhead and underground primary and secondary service lines. This project is required based on the obligation to serve new customers in the City.	

PROJECT FINANCING BY PLAN YEAR										
§ 806.1(3) SOURCE OF FUNDS:	Prior Authorized ²	Actual Funds Utilized as of 03/31/18	Estimated Expenditures 03/31/18 - 12/31/18	Estimated Authorized Balance ² 12/31/18	2019	2020	2021	2022	2023	TOTAL 5 Year CIP
CURRENT RESOURCES	125,000		125,000	\$ -	125,000	130,000	135,000	140,000	145,000	\$ 675,000
CAPITAL RESERVES				\$ -						\$ -
EQUIPMENT REPLACEMENT				\$ -						\$ -
GRANTS (SPECIFY)				\$ -						\$ -
BOND ISSUES				\$ -						\$ -
STATE REVOLVING LOAN				\$ -						\$ -
OTHER (SPECIFY)				\$ -						\$ -
TOTAL:	\$ 125,000	\$ -	\$ 125,000	\$ -	\$ 125,000	\$ 130,000	\$ 135,000	\$ 140,000	\$ 145,000	\$ 675,000
§ 806.1(4) ESTIMATED ANNUAL COST OF OPERATING / MAINTAINING PROJECT OR ASSET			OPERATING IMPACT:		2019	2020	2021	2022	2023	TOTAL
			INCREMENTAL COSTS (NET SAVINGS)							\$ -



PROJECT NO: E1911
PROJECT TITLE: 35kV Line 3202 Capacity Upgrade
PROJECT STATUS: New Project

FUNDING SUMMARY:

NEW FUNDING:	\$ 500,000
CARRYOVER FUNDING:	\$ -
TOTAL FUNDING:	\$ 500,000

CAPITAL BUDGET - PROJECT DETAIL	
DEPARTMENT:	Electric
DIVISION:	Electric
FUND:	Electric
PROJECT LOCATION:	Various Locations in the City
PROJECT PRIORITY:	4 - Medium
<small>This project is a NEED and not a WANT, but no significant risk in the deferral of this item</small>	
COMPREHENSIVE DEVELOPMENT PLANNING VISION ELEMENT:	Sustainable Community

§ 806.1(3) SUMMARY OF PROJECT DATA	
First Year in Program:	2019
Est. Completion Date:	2022
Est. Useful Life (in years):	30
Est. Total Cost:	\$ 500,000
Est. Spend @ 12/31/2018 (if underway) ¹ :	\$ -
% Complete (if underway):	0.0%
Balance to be funded ¹ :	\$ 500,000

¹ For ongoing projects, we must estimate total spent since inception through current year to derive the balance to be funded thereafter.

PROJECT COST BY CATEGORY		
CLASSIFICATION	ACCOUNT NUMBER	AMOUNT
Labor:	5195106.9860	\$ 160,000
Materials:	5195106.9760	\$ 340,000
Other Contracts:		
TOTAL PROJECT COST		\$ 500,000

² Council is not required to authorize budget year funding for this portion, but this portion of the project will indeed represent a cash outflow in the budget year and/or "out years."

Charter § 806.1(2) DESCRIPTION & JUSTIFICATION:	
<p>This project will upgrade the aerial and underground cable on 35kV line 3202 to ensure capacity and reliable back-up capacity to the Phillips substation, Chestnut Hill substation, Sandy Brae substation and West Main substation. This upgrade will also allow as to tie this feeder to the new substation in the future if needed.</p>	

PROJECT FINANCING BY PLAN YEAR										
§ 806.1(3) SOURCE OF FUNDS:	Prior Authorized ²	Actual Funds Utilized as of 03/31/18	Estimated Expenditures 03/31/18 - 12/31/18	Estimated Authorized Balance ² 12/31/18	2019	2020	2021	2022	2023	TOTAL 5 Year CIP
CURRENT RESOURCES				\$ -			250,000	250,000		\$ 500,000
CAPITAL RESERVES				\$ -						\$ -
EQUIPMENT REPLACEMENT				\$ -						\$ -
GRANTS (SPECIFY)				\$ -						\$ -
BOND ISSUES				\$ -						\$ -
STATE REVOLVING LOAN				\$ -						\$ -
OTHER (SPECIFY)				\$ -						\$ -
TOTAL:	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 250,000	\$ 250,000	\$ -	\$ 500,000
§ 806.1(4) ESTIMATED ANNUAL COST OF OPERATING / MAINTAINING PROJECT OR ASSET					2019	2020	2021	2022	2023	TOTAL
										\$ -



PROJECT NO: E1912
PROJECT TITLE: 35kV Disconnect Switches Replacement - Kershaw Substation
PROJECT STATUS: New Project

FUNDING SUMMARY:

NEW FUNDING:	\$ 450,000
CARRYOVER FUNDING:	\$ -
TOTAL FUNDING:	\$ 450,000

CAPITAL BUDGET - PROJECT DETAIL	
DEPARTMENT:	Electric
DIVISION:	Electric
FUND:	Electric
PROJECT LOCATION:	Kershaw Substation
PROJECT PRIORITY:	3 - Medium-High
<small>The City would be taking a calculated risk in the deferral of this item</small>	
COMPREHENSIVE DEVELOPMENT PLANNING VISION ELEMENT:	Sustainable Community

§ 806.1(3) SUMMARY OF PROJECT DATA	
First Year in Program:	2019
Est. Completion Date:	2023
Est. Useful Life (in years):	20
Est. Total Cost:	\$ 450,000
Est. Spend @ 12/31/2018 (if underway) ¹ :	\$ -
% Complete (if underway):	0.0%
Balance to be funded ¹ :	\$ 450,000

¹ For ongoing projects, we must estimate total spent since inception through current year to derive the balance to be funded thereafter.

PROJECT COST BY CATEGORY		
CLASSIFICATION	ACCOUNT NUMBER	AMOUNT
Labor:	5195106.9830	\$ 150,000
Materials:	5195106.9730	\$ 300,000
Other Contracts:		\$ -
TOTAL PROJECT COST		\$ 450,000

² Council is not required to authorize budget year funding for this portion, but this portion of the project will indeed represent a cash outflow in the budget year and/or "out years."

Charter § 806.1(2) DESCRIPTION & JUSTIFICATION:	
This project will replace 40 years old 35kV disconnect switches at Kershaw Substation.	

PROJECT FINANCING BY PLAN YEAR										
§ 806.1(3) SOURCE OF FUNDS:	Prior Authorized ²	Actual Funds Utilized as of 03/31/18	Estimated Expenditures 03/31/18 - 12/31/18	Estimated Authorized Balance ² 12/31/18	2019	2020	2021	2022	2023	TOTAL 5 Year CIP
CURRENT RESOURCES				\$ -			150,000	150,000	150,000	\$ 450,000
CAPITAL RESERVES				\$ -						\$ -
EQUIPMENT REPLACEMENT				\$ -						\$ -
GRANTS (SPECIFY)				\$ -						\$ -
BOND ISSUES				\$ -						\$ -
STATE REVOLVING LOAN				\$ -						\$ -
OTHER (SPECIFY)				\$ -						\$ -
TOTAL:	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 150,000	\$ 150,000	\$ 150,000	\$ 450,000
§ 806.1(4) ESTIMATED ANNUAL COST OF OPERATING / MAINTAINING PROJECT OR ASSET			OPERATING IMPACT:		2019	2020	2021	2022	2023	TOTAL
			INCREMENTAL COSTS (NET SAVINGS)							\$ -



PROJECT NO: E1805
PROJECT TITLE: Line Extension - UD Farm
PROJECT STATUS: In Progress (with end date)

FUNDING SUMMARY:
 NEW FUNDING: \$ 170,000
 CARRYOVER FUNDING: \$ -
 TOTAL FUNDING: \$ 170,000

CAPITAL BUDGET - PROJECT DETAIL	
DEPARTMENT:	Electric
DIVISION:	Electric
FUND:	Electric
PROJECT LOCATION:	University of Delaware: Farm
PROJECT PRIORITY:	4 - Medium
This project is a NEED and not a WANT, but no significant risk in the deferral of this item	
COMPREHENSIVE DEVELOPMENT PLANNING VISION ELEMENT:	Sustainable Community

§ 806.1(3) SUMMARY OF PROJECT DATA	
First Year in Program:	2018
Est. Completion Date:	2019
Est. Useful Life (in years):	30
Est. Total Cost:	\$ 170,000
Est. Spend @ 12/31/2018 (if underway) ¹ :	\$ -
% Complete (if underway):	0.0%
Balance to be funded ¹ :	\$ 170,000

¹ For ongoing projects, we must estimate total spent since inception through current year to derive the balance to be funded thereafter.

PROJECT COST BY CATEGORY		
CLASSIFICATION	ACCOUNT NUMBER	AMOUNT
Labor:	5195106.9860	\$ 80,000
Materials:	5195106.9760	\$ 90,000
Other Contracts:		\$ -
TOTAL PROJECT COST		\$ 170,000

² Council is not required to authorize budget year funding for this portion, but this portion of the project will indeed represent a cash outflow in the budget year and/or "out years."

Charter § 806.1(2) DESCRIPTION & JUSTIFICATION:
To ensure capacity and reliable back-up capacity to the Star Campus, the University of Delaware South Campus and City customers on South College Avenue, it is proposed to install a new 12,470 volt circuit from Old South Chapel Street to South College Avenue through the University of Delaware Farm. This project is based on approval from the University of Delaware.

PROJECT FINANCING BY PLAN YEAR										
§ 806.1(3) SOURCE OF FUNDS:	Prior Authorized ²	Actual Funds Utilized as of 03/31/18	Estimated Expenditures 03/31/18 - 12/31/18	Estimated Authorized Balance ² 12/31/18	2019	2020	2021	2022	2023	TOTAL 5 Year CIP
CURRENT RESOURCES				\$ -	170,000					\$ 170,000
CAPITAL RESERVES				\$ -						\$ -
EQUIPMENT REPLACEMENT				\$ -						\$ -
GRANTS (SPECIFY)				\$ -						\$ -
BOND ISSUES				\$ -						\$ -
STATE REVOLVING LOAN				\$ -						\$ -
OTHER (SPECIFY)				\$ -						\$ -
TOTAL:	\$ -	\$ -	\$ -	\$ -	\$ 170,000	\$ -	\$ -	\$ -	\$ -	\$ 170,000
§ 806.1(4) ESTIMATED ANNUAL COST OF OPERATING / MAINTAINING PROJECT OR ASSET					2019	2020	2021	2022	2023	TOTAL
										\$ -



PROJECT NO: E1806
PROJECT TITLE: Christianstead Underground Primary Cable Addition
PROJECT STATUS: In Progress (with end date)

FUNDING SUMMARY:

NEW FUNDING:	\$ 50,000
CARRYOVER FUNDING:	\$ -
TOTAL FUNDING:	\$ 50,000

CAPITAL BUDGET - PROJECT DETAIL	
DEPARTMENT:	Electric
DIVISION:	Electric
FUND:	Electric
PROJECT LOCATION:	Christianstead
PROJECT PRIORITY:	4 - Medium
<small>This project is a NEED and not a WANT, but no significant risk in the deferral of this item</small>	
COMPREHENSIVE DEVELOPMENT PLANNING VISION ELEMENT:	Sustainable Community

§ 806.1(3) SUMMARY OF PROJECT DATA	
First Year in Program:	2018
Est. Completion Date:	2020
Est. Useful Life (in years):	30
Est. Total Cost:	\$ 50,000
Est. Spend @ 12/31/2018 (if underway) ¹ :	\$ -
% Complete (if underway):	0.0%
Balance to be funded ¹ :	\$ 50,000

¹ For ongoing projects, we must estimate total spent since inception through current year to derive the balance to be funded thereafter.

PROJECT COST BY CATEGORY		
CLASSIFICATION	ACCOUNT NUMBER	AMOUNT
Labor:	5195106.9860	\$ 8,000
Materials:	5195106.9760	\$ 42,000
Other Contracts:		\$ -
TOTAL PROJECT COST		\$ 50,000

² Council is not required to authorize budget year funding for this portion, but this portion of the project will indeed represent a cash outflow in the budget year and/or "out years."

Charter § 806.1(2) DESCRIPTION & JUSTIFICATION:	
An additional underground high voltage cable is needed in Christianstead to balance load during emergency condition when an existing high voltage cable fails. When we experience a cable failure, the remaining cable can not be fused properly to coordinate with upstream fuses.	

PROJECT FINANCING BY PLAN YEAR										
§ 806.1(3) SOURCE OF FUNDS:	Prior Authorized ²	Actual Funds Utilized as of 03/31/18	Estimated Expenditures 03/31/18 - 12/31/18	Estimated Authorized Balance ² 12/31/18	2019	2020	2021	2022	2023	TOTAL 5 Year CIP
CURRENT RESOURCES				\$ -		50,000				\$ 50,000
CAPITAL RESERVES				\$ -						\$ -
EQUIPMENT REPLACEMENT				\$ -						\$ -
GRANTS (SPECIFY)				\$ -						\$ -
BOND ISSUES				\$ -						\$ -
STATE REVOLVING LOAN				\$ -						\$ -
OTHER (SPECIFY)				\$ -						\$ -
TOTAL:	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 50,000	\$ -	\$ -	\$ -	\$ 50,000
§ 806.1(4) ESTIMATED ANNUAL COST OF OPERATING / MAINTAINING PROJECT OR ASSET					2019	2020	2021	2022	2023	TOTAL
					OPERATING IMPACT:					
					INCREMENTAL COSTS (NET SAVINGS)					\$ -



PROJECT NO: E1807
PROJECT TITLE: Relay Replacements - Kershaw Substation
PROJECT STATUS: In Progress (with end date)

FUNDING SUMMARY:
 NEW FUNDING: \$ 200,000
 CARRYOVER FUNDING: \$ -
 TOTAL FUNDING: \$ 200,000

CAPITAL BUDGET - PROJECT DETAIL	
DEPARTMENT:	Electric
DIVISION:	Electric
FUND:	Electric
PROJECT LOCATION:	Kershaw Substation
PROJECT PRIORITY:	5 - Low
<small>This project is a NEED and not a WANT, but it can start in year two of this CIP or later</small>	
COMPREHENSIVE DEVELOPMENT PLANNING VISION ELEMENT:	Sustainable Community

§ 806.1(3) SUMMARY OF PROJECT DATA	
First Year in Program:	2018
Est. Completion Date:	2023
Est. Useful Life (in years):	20
Est. Total Cost:	\$ 200,000
Est. Spend @ 12/31/2018 (if underway) ¹ :	\$ -
% Complete (if underway):	0.0%
Balance to be funded ¹ :	\$ 200,000

¹ For ongoing projects, we must estimate total spent since inception through current year to derive the balance to be funded thereafter.

PROJECT COST BY CATEGORY		
CLASSIFICATION	ACCOUNT NUMBER	AMOUNT
Labor:	5195106.9860	\$ 70,000
Materials:	5195106.9760	\$ 130,000
Other Contracts:		\$ -
TOTAL PROJECT COST		\$ 200,000

² Council is not required to authorize budget year funding for this portion, but this portion of the project will indeed represent a cash outflow in the budget year and/or "out years."

Charter § 806.1(2) DESCRIPTION & JUSTIFICATION:	
This project will replace electro mechanical relays on circuit breakers 7, 8 and 9 at Kershaw Substation and connect them to the SCADA system. This will allow us to see breaker status and also have remote control.	

PROJECT FINANCING BY PLAN YEAR										
§ 806.1(3) SOURCE OF FUNDS:	Prior Authorized ²	Actual Funds Utilized as of 03/31/18	Estimated Expenditures 03/31/18 - 12/31/18	Estimated Authorized Balance ² 12/31/18	2019	2020	2021	2022	2023	TOTAL 5 Year CIP
CURRENT RESOURCES				\$ -		50,000	50,000	50,000	50,000	\$ 200,000
CAPITAL RESERVES				\$ -						\$ -
EQUIPMENT REPLACEMENT				\$ -						\$ -
GRANTS (SPECIFY)				\$ -						\$ -
BOND ISSUES				\$ -						\$ -
STATE REVOLVING LOAN				\$ -						\$ -
OTHER (SPECIFY)				\$ -						\$ -
TOTAL:	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 50,000	\$ 50,000	\$ 50,000	\$ 50,000	\$ 200,000
§ 806.1(4) ESTIMATED ANNUAL COST OF OPERATING / MAINTAINING PROJECT OR ASSET					2019	2020	2021	2022	2023	TOTAL
					OPERATING IMPACT:					
					INCREMENTAL COSTS (NET SAVINGS)					\$ -



PROJECT NO: E1808
PROJECT TITLE: Voltage Upgrade - North College Avenue
PROJECT STATUS: In Progress (with end date)

FUNDING SUMMARY:

NEW FUNDING:	\$ 50,000
CARRYOVER FUNDING:	\$ -
TOTAL FUNDING:	\$ 50,000

CAPITAL BUDGET - PROJECT DETAIL	
DEPARTMENT:	Electric
DIVISION:	Electric
FUND:	Electric
PROJECT LOCATION:	North College Avenue
PROJECT PRIORITY:	5 - Low
<small>This project is a NEED and not a WANT, but it can start in year two of this CIP or later</small>	
COMPREHENSIVE DEVELOPMENT PLANNING VISION ELEMENT:	Sustainable Community

§ 806.1(3) SUMMARY OF PROJECT DATA	
First Year in Program:	2018
Est. Completion Date:	2020
Est. Useful Life (in years):	30
Est. Total Cost:	\$ 50,000
Est. Spend @ 12/31/2018 (if underway) ¹ :	\$ -
% Complete (if underway):	0.0%
Balance to be funded ¹ :	\$ 50,000

¹ For ongoing projects, we must estimate total spent since inception through current year to derive the balance to be funded thereafter.

PROJECT COST BY CATEGORY		
CLASSIFICATION	ACCOUNT NUMBER	AMOUNT
Labor:	5195106.9860	\$ 23,800
Materials:	5195106.9760	\$ 26,200
Other Contracts:		\$ -
TOTAL PROJECT COST		\$ 50,000

² Council is not required to authorize budget year funding for this portion, but this portion of the project will indeed represent a cash outflow in the budget year and/or "out years."

Charter § 806.1(2) DESCRIPTION & JUSTIFICATION:
Replace poles on North College Avenue and install a primary metering pole in preparation for a 4160 volt to 12470 volt upgrade of University buildings on North College Avenue.

PROJECT FINANCING BY PLAN YEAR										
§ 806.1(3) SOURCE OF FUNDS:	Prior Authorized ²	Actual Funds Utilized as of 03/31/18	Estimated Expenditures 03/31/18 - 12/31/18	Estimated Authorized Balance ² 12/31/18	2019	2020	2021	2022	2023	TOTAL 5 Year CIP
CURRENT RESOURCES				\$ -		50,000				\$ 50,000
CAPITAL RESERVES				\$ -						\$ -
EQUIPMENT REPLACEMENT				\$ -						\$ -
GRANTS (SPECIFY)				\$ -						\$ -
BOND ISSUES				\$ -						\$ -
STATE REVOLVING LOAN				\$ -						\$ -
OTHER (SPECIFY)				\$ -						\$ -
TOTAL:	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 50,000	\$ -	\$ -	\$ -	\$ 50,000
§ 806.1(4) ESTIMATED ANNUAL COST OF OPERATING / MAINTAINING PROJECT OR ASSET	OPERATING IMPACT:				2019	2020	2021	2022	2023	TOTAL
	INCREMENTAL COSTS (NET SAVINGS)									\$ -



PROJECT NO: E1809
PROJECT TITLE: 12.47kV Line Extension
PROJECT STATUS: In Progress (with end date)

FUNDING SUMMARY:

NEW FUNDING:	\$ 100,000
CARRYOVER FUNDING:	\$ -
TOTAL FUNDING:	\$ 100,000

CAPITAL BUDGET - PROJECT DETAIL	
DEPARTMENT:	Electric
DIVISION:	Electric
FUND:	Electric
PROJECT LOCATION:	Christina Parkway
PROJECT PRIORITY:	5 - Low
<small>This project is a NEED and not a WANT, but it can start in year two of this CIP or later</small>	
COMPREHENSIVE DEVELOPMENT PLANNING VISION ELEMENT:	Sustainable Community

§ 806.1(3) SUMMARY OF PROJECT DATA	
First Year in Program:	2018
Est. Completion Date:	2019
Est. Useful Life (in years):	30
Est. Total Cost:	\$ 100,000
Est. Spend @ 12/31/2018 (if underway) ¹ :	\$ -
% Complete (if underway):	0.0%
Balance to be funded ¹ :	\$ 100,000

¹ For ongoing projects, we must estimate total spent since inception through current year to derive the balance to be funded thereafter.

PROJECT COST BY CATEGORY		
CLASSIFICATION	ACCOUNT NUMBER	AMOUNT
Labor:	5195106.9860	\$ 61,000
Materials:	5195106.9760	\$ 39,000
Other Contracts:		\$ -
TOTAL PROJECT COST		\$ 100,000

² Council is not required to authorize budget year funding for this portion, but this portion of the project will indeed represent a cash outflow in the budget year and/or "out years."

Charter § 806.1(2) DESCRIPTION & JUSTIFICATION:
A new 12.47kV line extension is needed for additional capacity and back-up capacity for the Star Campus. This extension will also tie Sandy Brae substation transformer 64 to Chestnut Hill Road transformers 64 and 94 to provide back-up capacity.

PROJECT FINANCING BY PLAN YEAR										
§ 806.1(3) SOURCE OF FUNDS:	Prior Authorized ²	Actual Funds Utilized as of 03/31/18	Estimated Expenditures 03/31/18 - 12/31/18	Estimated Authorized Balance ² 12/31/18	2019	2020	2021	2022	2023	TOTAL 5 Year CIP
CURRENT RESOURCES				\$ -	100,000					\$ 100,000
CAPITAL RESERVES				\$ -						\$ -
EQUIPMENT REPLACEMENT				\$ -						\$ -
GRANTS (SPECIFY)				\$ -						\$ -
BOND ISSUES				\$ -						\$ -
STATE REVOLVING LOAN				\$ -						\$ -
OTHER (SPECIFY)				\$ -						\$ -
TOTAL:	\$ -	\$ -	\$ -	\$ -	\$ 100,000	\$ -	\$ -	\$ -	\$ -	\$ 100,000
§ 806.1(4) ESTIMATED ANNUAL COST OF OPERATING / MAINTAINING PROJECT OR ASSET			OPERATING IMPACT:		2019	2020	2021	2022	2023	TOTAL
			INCREMENTAL COSTS (NET SAVINGS)							\$ -



PROJECT NO: E1810
PROJECT TITLE: Lightning Arrestor Replacement
PROJECT STATUS: In Progress (with end date)

FUNDING SUMMARY:
 NEW FUNDING: \$ 235,000
 CARRYOVER FUNDING: \$ -
 TOTAL FUNDING: \$ 235,000

CAPITAL BUDGET - PROJECT DETAIL	
DEPARTMENT:	Electric
DIVISION:	Electric
FUND:	Electric
PROJECT LOCATION:	Various
PROJECT PRIORITY:	5 - Low
<small>This project is a NEED and not a WANT, but it can start in year two of this CIP or later</small>	
COMPREHENSIVE DEVELOPMENT PLANNING VISION ELEMENT:	Sustainable Community

§ 806.1(3) SUMMARY OF PROJECT DATA	
First Year in Program:	2018
Est. Completion Date:	2023
Est. Useful Life (in years):	30
Est. Total Cost:	\$ 235,000
Est. Spend @ 12/31/2018 (if underway) ¹ :	\$ -
% Complete (if underway):	0.0%
Balance to be funded ¹ :	\$ 235,000

¹ For ongoing projects, we must estimate total spent since inception through current year to derive the balance to be funded thereafter.

PROJECT COST BY CATEGORY		
CLASSIFICATION	ACCOUNT NUMBER	AMOUNT
Labor:	5195106.9860	\$ 180,000
Materials:	5195106.9760	\$ 55,000
Other Contracts:		\$ -
TOTAL PROJECT COST		\$ 235,000

² Council is not required to authorize budget year funding for this portion, but this portion of the project will indeed represent a cash outflow in the budget year and/or "out years."

Charter § 806.1(2) DESCRIPTION & JUSTIFICATION:	
Replace older lightning arrestors on the 12.47kV system. This will prevent power outages and improve lightning protection on the distribution system.	

PROJECT FINANCING BY PLAN YEAR										
§ 806.1(3) SOURCE OF FUNDS:	Prior Authorized ²	Actual Funds Utilized as of 03/31/18	Estimated Expenditures 03/31/18 - 12/31/18	Estimated Authorized Balance ² 12/31/18	2019	2020	2021	2022	2023	TOTAL 5 Year CIP
CURRENT RESOURCES				\$ -					235,000	\$ 235,000
CAPITAL RESERVES				\$ -						\$ -
EQUIPMENT REPLACEMENT				\$ -						\$ -
GRANTS (SPECIFY)				\$ -						\$ -
BOND ISSUES				\$ -						\$ -
STATE REVOLVING LOAN				\$ -						\$ -
OTHER (SPECIFY)				\$ -						\$ -
TOTAL:	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 235,000	\$ 235,000
§ 806.1(4) ESTIMATED ANNUAL COST OF OPERATING / MAINTAINING PROJECT OR ASSET	OPERATING IMPACT:				2019	2020	2021	2022	2023	TOTAL
	INCREMENTAL COSTS (NET SAVINGS)									\$ -



PROJECT NO: E1602
PROJECT TITLE: Circuit Breaker Replacement
PROJECT STATUS: In Progress (with end date)

FUNDING SUMMARY:

NEW FUNDING:	\$ 65,000
CARRYOVER FUNDING:	\$ -
TOTAL FUNDING:	\$ 65,000

CAPITAL BUDGET - PROJECT DETAIL	
DEPARTMENT:	Electric
DIVISION:	Electric
FUND:	Electric
PROJECT LOCATION:	Fremont Road Substation
PROJECT PRIORITY:	3 - Medium-High
<small>The City would be taking a calculated risk in the deferral of this item</small>	
COMPREHENSIVE DEVELOPMENT PLANNING VISION ELEMENT:	Sustainable Community

§ 806.1(3) SUMMARY OF PROJECT DATA	
First Year in Program:	2016
Est. Completion Date:	2020
Est. Useful Life (in years):	30
Est. Total Cost:	\$ 65,000
Est. Spend @ 12/31/2018 (if underway) ¹ :	\$ -
% Complete (if underway):	0.0%
Balance to be funded ¹ :	\$ 65,000

¹ For ongoing projects, we must estimate total spent since inception through current year to derive the balance to be funded thereafter.

PROJECT COST BY CATEGORY		
CLASSIFICATION	ACCOUNT NUMBER	AMOUNT
Labor:	5195106.9830	\$ 10,000
Materials:	5195106.9730	\$ 40,000
Other Contracts:	5195106.9730	\$ 15,000
TOTAL PROJECT COST		\$ 65,000

² Council is not required to authorize budget year funding for this portion, but this portion of the project will indeed represent a cash outflow in the budget year and/or "out years."

Charter § 806.1(2) DESCRIPTION & JUSTIFICATION:	
The 35kV oil circuit breaker installed in 1975 feeding transformer 47 at the Fremont Road Substation does not always open and close properly. Due to this problem at its age, it is recommended it be replaced with a vacuum type breaker.	

PROJECT FINANCING BY PLAN YEAR											
§ 806.1(3) SOURCE OF FUNDS:	Prior Authorized ²	Actual Funds Utilized as of 03/31/18	Estimated Expenditures 03/31/18 - 12/31/18	Estimated Authorized Balance ² 12/31/18	2019	2020	2021	2022	2023	TOTAL 5 Year CIP	
CURRENT RESOURCES				\$ -		65,000				\$ 65,000	
CAPITAL RESERVES				\$ -						\$ -	
EQUIPMENT REPLACEMENT				\$ -						\$ -	
GRANTS (SPECIFY)				\$ -						\$ -	
BOND ISSUES				\$ -						\$ -	
STATE REVOLVING LOAN				\$ -						\$ -	
OTHER (SPECIFY)				\$ -						\$ -	
TOTAL:	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 65,000	\$ -	\$ -	\$ -	\$ 65,000	
§ 806.1(4) ESTIMATED ANNUAL COST OF OPERATING / MAINTAINING PROJECT OR ASSET					OPERATING IMPACT:	2019	2020	2021	2022	2023	TOTAL
					INCREMENTAL COSTS (NET SAVINGS)						\$ -



PROJECT NO: E1502
PROJECT TITLE: Underground Distribution - UD Star Campus
PROJECT STATUS: In Progress (with end date)

FUNDING SUMMARY:

NEW FUNDING:	\$ 600,000
CARRYOVER FUNDING:	\$ -
TOTAL FUNDING:	\$ 600,000

CAPITAL BUDGET - PROJECT DETAIL	
DEPARTMENT:	Electric
DIVISION:	Electric
FUND:	Electric
PROJECT LOCATION:	University of Delaware: Star Campus
PROJECT PRIORITY:	1 - Highest Priority Level
	<i>Project underway and must be completed</i>
COMPREHENSIVE DEVELOPMENT PLANNING VISION ELEMENT:	Sustainable Community

§ 806.1(3) SUMMARY OF PROJECT DATA	
First Year in Program:	2015
Est. Completion Date:	2023
Est. Useful Life (in years):	30
Est. Total Cost:	\$ 720,000
Est. Spend @ 12/31/2018 (if underway) ¹ :	\$ 120,000
% Complete (if underway):	16.7%
Balance to be funded ¹ :	\$ 600,000

¹ For ongoing projects, we must estimate total spent since inception through current year to derive the balance to be funded thereafter.

PROJECT COST BY CATEGORY		
CLASSIFICATION	ACCOUNT NUMBER	AMOUNT
Labor:		\$ -
Materials:		\$ -
Other Contracts:	5195106.9760	\$ 600,000
TOTAL PROJECT COST		\$ 600,000

² Council is not required to authorize budget year funding for this portion, but this portion of the project will indeed represent a cash outflow in the budget year and/or "out years."

Charter § 806.1(2) DESCRIPTION & JUSTIFICATION:
Underground electrical distribution equipment needed for the Star Campus. Expenditures to be reimbursed by the Developer or Customer.

PROJECT FINANCING BY PLAN YEAR										
§ 806.1(3) SOURCE OF FUNDS:	Prior Authorized ²	Actual Funds Utilized as of 03/31/18	Estimated Expenditures 03/31/18 - 12/31/18	Estimated Authorized Balance ² 12/31/18	2019	2020	2021	2022	2023	TOTAL 5 Year CIP
CURRENT RESOURCES				\$ -						\$ -
CAPITAL RESERVES				\$ -						\$ -
EQUIPMENT REPLACEMENT				\$ -						\$ -
GRANTS (SPECIFY)				\$ -						\$ -
BOND ISSUES				\$ -						\$ -
STATE REVOLVING LOAN				\$ -						\$ -
OTHER Developer or Customer	120,000		120,000	\$ -	120,000	120,000	120,000	120,000	120,000	\$ 600,000
TOTAL:	\$ 120,000	\$ -	\$ 120,000	\$ -	\$ 120,000	\$ 120,000	\$ 120,000	\$ 120,000	\$ 120,000	\$ 600,000
§ 806.1(4) ESTIMATED ANNUAL COST OF OPERATING / MAINTAINING PROJECT OR ASSET					2019	2020	2021	2022	2023	TOTAL
										\$ -



PROJECT NO: E1203
PROJECT TITLE: CAD Software
PROJECT STATUS: In Progress (with end date)

FUNDING SUMMARY:

NEW FUNDING:	\$ -
CARRYOVER FUNDING:	\$ 40,444
TOTAL FUNDING:	\$ 40,444

CAPITAL BUDGET - PROJECT DETAIL	
DEPARTMENT:	Electric
DIVISION:	Electric
FUND:	Electric
PROJECT LOCATION:	Municipal Building
PROJECT PRIORITY:	1 - Highest Priority Level
	<i>Project underway and must be completed</i>
COMPREHENSIVE DEVELOPMENT PLANNING VISION ELEMENT:	Sustainable Community

§ 806.1(3) SUMMARY OF PROJECT DATA	
First Year in Program:	2012
Est. Completion Date:	2019
Est. Useful Life (in years):	15
Est. Total Cost:	\$ 68,444
Est. Spend @ 12/31/2018 (if underway) ¹ :	\$ 28,000
% Complete (if underway):	40.9%
Balance to be funded ¹ :	\$ 40,444

¹ For ongoing projects, we must estimate total spent since inception through current year to derive the balance to be funded thereafter.

PROJECT COST BY CATEGORY		
CLASSIFICATION	ACCOUNT NUMBER	AMOUNT
Labor:		\$ -
Materials:	5195106.9622	\$ 40,444
Other Contracts:		\$ -
TOTAL PROJECT COST		\$ 40,444

² Council is not required to authorize budget year funding for this portion, but this portion of the project will indeed represent a cash outflow in the budget year and/or "out years."

Charter § 806.1(2) DESCRIPTION & JUSTIFICATION:	
This software is needed to model the city's electric distribution system. This software has engineering modules to assist in fault calculations, voltage drop calculations, coordination studies and feeder optimization.	

PROJECT FINANCING BY PLAN YEAR										
§ 806.1(3) SOURCE OF FUNDS:	Prior Authorized ²	Actual Funds Utilized as of 03/31/18	Estimated Expenditures 03/31/18 - 12/31/18	Estimated Authorized Balance ² 12/31/18	2019	2020	2021	2022	2023	TOTAL 5 Year CIP
CURRENT RESOURCES				\$ -						\$ -
CAPITAL RESERVES	68,444	28,000		\$ 40,444	40,444					\$ 40,444
EQUIPMENT REPLACEMENT				\$ -						\$ -
GRANTS (SPECIFY)				\$ -						\$ -
BOND ISSUES				\$ -						\$ -
STATE REVOLVING LOAN				\$ -						\$ -
OTHER (SPECIFY)				\$ -						\$ -
TOTAL:	\$ 68,444	\$ 28,000	\$ -	\$ 40,444	\$ 40,444	\$ -	\$ -	\$ -	\$ -	\$ 40,444
§ 806.1(4) ESTIMATED ANNUAL COST OF OPERATING / MAINTAINING PROJECT OR ASSET			OPERATING IMPACT:		2019	2020	2021	2022	2023	TOTAL
			INCREMENTAL COSTS (NET SAVINGS)							\$ -



PROJECT NO: E0503
PROJECT TITLE: SCADA and Automatic Switching
PROJECT STATUS: In Progress (with end date)

FUNDING SUMMARY:

NEW FUNDING:	\$ 1,355,000
CARRYOVER FUNDING:	\$ -
TOTAL FUNDING:	\$ 1,355,000

CAPITAL BUDGET - PROJECT DETAIL	
DEPARTMENT:	Electric
DIVISION:	Electric
FUND:	Electric
PROJECT LOCATION:	Various
PROJECT PRIORITY:	1 - Highest Priority Level <i>Project underway and must be completed</i>
COMPREHENSIVE DEVELOPMENT PLANNING VISION ELEMENT:	Sustainable Community

§ 806.1(3) SUMMARY OF PROJECT DATA	
First Year in Program:	2005
Est. Completion Date:	2022
Est. Useful Life (in years):	20
Est. Total Cost:	\$ 1,974,896
Est. Spend @ 12/31/2018 (if underway) ¹ :	\$ 619,896
% Complete (if underway):	31.4%
Balance to be funded ¹ :	\$ 1,355,000

¹ For ongoing projects, we must estimate total spent since inception through current year to derive the balance to be funded thereafter.

PROJECT COST BY CATEGORY		
CLASSIFICATION	ACCOUNT NUMBER	AMOUNT
Labor:	5195106.9860	\$ 266,500
Materials:	5195106.9760	\$ 934,500
Other Contracts:	5195106.9960	\$ 154,000
TOTAL PROJECT COST		\$ 1,355,000

² Council is not required to authorize budget year funding for this portion, but this portion of the project will indeed represent a cash outflow in the budget year and/or "out years."

Charter § 806.1(2) DESCRIPTION & JUSTIFICATION:
<p>The auto transfer system will allow intelligent transfer of substations on the 34.5kV subtransmission system using reclosers to isolate a faulted circuit and switch a substation to a different circuit if all logic conditions are met. Large outages will be reduced to about a minute and a notification of a transfer will be sent to on call personnel to investigate.</p> <p>Also includes (previous CIP E1802) - 15kV Automatic Switching:</p> <p>This project will add 8 - 15kV reclosers to the existing automation software in 2018 to improve reliability to customers at the Delaware Technology Park and customers on Bellevue Road. The reclosers will automatically isolate a faulted circuit and switch the customers to a different circuit if the alternate circuit is available. In 2019, 11 reclosers will be installed to improve reliability to the UD Center Campus and North Campus. In 2022, 10 reclosers will be installed on South College and the Christina Parkway to improve reliability to the UD South Campus and the Star Campus.</p> <p>Our existing SCADA system has become a legacy system so our SCADA provider has proposed to the City to upgrade our existing SCADA system to a newer platform in order to keep up with the industrial standards.</p>

PROJECT FINANCING BY PLAN YEAR										
§ 806.1(3) SOURCE OF FUNDS:	Prior Authorized ²	Actual Funds Utilized as of 03/31/18	Estimated Expenditures 03/31/18 - 12/31/18	Estimated Authorized Balance ² 12/31/18	2019	2020	2021	2022	2023	TOTAL 5 Year CIP
CURRENT RESOURCES				\$ -	655,000	250,000		450,000		\$ 1,355,000
CAPITAL RESERVES	619,896	72,385	547,511	\$ -						\$ -
EQUIPMENT REPLACEMENT				\$ -						\$ -
GRANTS (SPECIFY)				\$ -						\$ -
BOND ISSUES				\$ -						\$ -
STATE REVOLVING LOAN				\$ -						\$ -
OTHER (SPECIFY)				\$ -						\$ -
TOTAL:	\$ 619,896	\$ 72,385	\$ 547,511	\$ -	\$ 655,000	\$ 250,000	\$ -	\$ 450,000	\$ -	\$ 1,355,000
§ 806.1(4) ESTIMATED ANNUAL COST OF OPERATING / MAINTAINING PROJECT OR ASSET					2019	2020	2021	2022	2023	TOTAL
					OPERATING IMPACT:					
					INCREMENTAL COSTS (NET SAVINGS)					\$ -



PROJECT NO: EEQSF
PROJECT TITLE: Equipment Replacement Program
PROJECT STATUS: Reoccurring (with no end date)

FUNDING SUMMARY:

NEW FUNDING:	\$ 705,000
CARRYOVER FUNDING:	\$ -
TOTAL FUNDING:	\$ 705,000

CAPITAL BUDGET - PROJECT DETAIL	
DEPARTMENT:	Electric
DIVISION:	Electric
FUND:	Electric
PROJECT LOCATION:	Various
PROJECT PRIORITY:	1 - Highest Priority Level
<i>Project underway and must be completed</i>	
COMPREHENSIVE DEVELOPMENT PLANNING VISION ELEMENT:	Sustainable Community

§ 806.1(3) SUMMARY OF PROJECT DATA	
First Year in Program:	Perpetual
Est. Completion Date:	Perpetual
Est. Useful Life (in years):	Various
Est. Total Cost:	\$ 1,045,000
Est. Spend @ 12/31/2018 (if underway) ¹ :	\$ 340,000
% Complete (if underway):	32.5%
Balance to be funded ¹ :	\$ 705,000

¹ For ongoing projects, we must estimate total spent since inception through current year to derive the balance to be funded thereafter.

PROJECT COST BY CATEGORY		
CLASSIFICATION	ACCOUNT NUMBER	AMOUNT
Labor:		\$ -
Materials:		\$ -
Other Contracts:	5195106.9623	\$ 705,000
TOTAL PROJECT COST		\$ 705,000

² Council is not required to authorize budget year funding for this portion, but this portion of the project will indeed represent a cash outflow in the budget year and/or "out years."

Charter § 806.1(2) DESCRIPTION & JUSTIFICATION:
Planned advance funding accumulated through depreciation to replace essential equipment when necessary.
Please see the attached schedule.

PROJECT FINANCING BY PLAN YEAR										
§ 806.1(3) SOURCE OF FUNDS:	Prior Authorized ²	Actual Funds Utilized as of 03/31/18	Estimated Expenditures 03/31/18 - 12/31/18	Estimated Authorized Balance ² 12/31/18	2019	2020	2021	2022	2023	TOTAL 5 Year CIP
CURRENT RESOURCES				\$ -	111,218	53,418				\$ 164,636
CAPITAL RESERVES				\$ -						\$ -
EQUIPMENT REPLACEMENT	340,000	60,893	279,107	\$ -	291,782	248,582				\$ 540,364
GRANTS (SPECIFY)				\$ -						\$ -
BOND ISSUES				\$ -						\$ -
STATE REVOLVING LOAN				\$ -						\$ -
OTHER (SPECIFY)				\$ -						\$ -
TOTAL:	\$ 340,000	\$ 60,893	\$ 279,107	\$ -	\$ 403,000	\$ 302,000	\$ -	\$ -	\$ -	\$ 705,000
§ 806.1(4) ESTIMATED ANNUAL COST OF OPERATING / MAINTAINING PROJECT OR ASSET					2019	2020	2021	2022	2023	TOTAL
					OPERATING IMPACT:					
					INCREMENTAL COSTS (NET SAVINGS)					\$ -