Work Classification

Category:	Substation
Type:	REL7
Type Desc:	GENERAL MODERNIZATION
Work Type:	Repair/Replace Failed Equipment

Ownership / Management

AWC:	
Statewide:	Yes
Owner:	[redacted]
Manager:	[redacted]

Project Information

Status:	Prelim Design Approved
SPS #:	
AIS Score:	

Associated Projects:

Assignment ID:	13234-SS lighting upgrades
Patrol Find ID:	

Budget Summary - Preferred Option

SS Lighting Upgrades

2015

ID	Title	Status	Rev #	Contingency	Expenditure Amount	Net Estimate
4	[redacted] Upgrades	Prelim	0	0 %	$89,180	$89,180
6	[redacted] Upgrds	Prelim	0	0 %	$65,196	$65,196
7	[redacted] Upgrades	Prelim	0	0 %	$82,142	$82,142
8	[redacted] Upgrades	Prelim	0	0 %	$94,516	$94,516
9	[redacted] Upgrades	Prelim	0	0 %	$80,135	$80,135
10	[redacted] Upgrades	Prelim	0	0 %	$84,919	$84,919
11	[redacted] Upgrades	Prelim	0	0 %	$84,945	$84,945
17	[redacted] Upgrades	Prelim	0	0 %	$91,577	$91,577
				2015 Total:	**$672,610**	**$672,610**

2016

ID	Title	Status	Rev #	Contingency	Expenditure Amount	Net Estimate
1	[redacted]	Prelim	0	0 %	$77,658	$77,658
2	[redacted] upgrades	Prelim	0	0 %	$66,365	$66,365
3	[redacted] upgrades	Prelim	0	0 %	$68,091	$68,091
5	[redacted] Upgrades	Prelim	0	0 %	$68,782	$68,782
12	[redacted] - Upgrades	Prelim	0	0 %	$90,540	$90,540
13	[redacted] - Upgrades	Prelim	0	0 %	$94,280	$94,280
14	[redacted] - Upgrades	Prelim	0	0 %	$177,718	$177,718
15	[redacted] - Upgrades	Prelim	0	0 %	$76,565	$76,565
16	[redacted] Upgrades	Prelim	0	0 %	$37,395	$37,395
				2016 Total:	**$757,394**	**$757,394**
				Total Project:	**$1,430,004**	**$1,430,004**

Project Option Summary

ID	Description	Segments	Preliminary Estimate	Construction Estimate	Variance	IEEE $/CMS	All (w/Storm)	Prfrd
O4	SS Lighting Upgrades	1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17	$1,430,004	$0	100 %	$0.00	$0.00	☑

Segments

ID	Title	Preliminary Estimate	Construction Estimate	Variance	IEEE $/CMS	All (w/Storm)
1	[redacted]	$77,658			$0.00	$0.00
2	[redacted] upgrades	$66,365			$0.00	$0.00
3	[redacted]upgrades	$68,091			$0.00	$0.00
4	[redacted]15U-Upgrades	$89,180			$0.00	$0.00
5	[redacted]Upgrades	$68,782			$0.00	$0.00
6	[redacted] Upgrds	$65,196			$0.00	$0.00
7	[redacted] - Upgrades	$82,142			$0.00	$0.00
8	[redacted] - Upgrades	$94,516			$0.00	$0.00
9	[redacted] - Upgrades	$80,135			$0.00	$0.00
10	[redacted] - Upgrades	$84,919			$0.00	$0.00
11	[redacted] Upgrades	$84,945			$0.00	$0.00
12	[redacted] - Upgrades	$90,540			$0.00	$0.00
13	[redacted] - Upgrades	$94,280			$0.00	$0.00
14	[redacted]- Upgrades	$177,718			$0.00	$0.00
15	[redacted]- Upgrades	$76,565			$0.00	$0.00
16	[redacted] Upgrades	$37,395			$0.00	$0.00
17	[redacted] Upgrades	$91,577			$0.00	$0.00

Background / Scope

Issue:

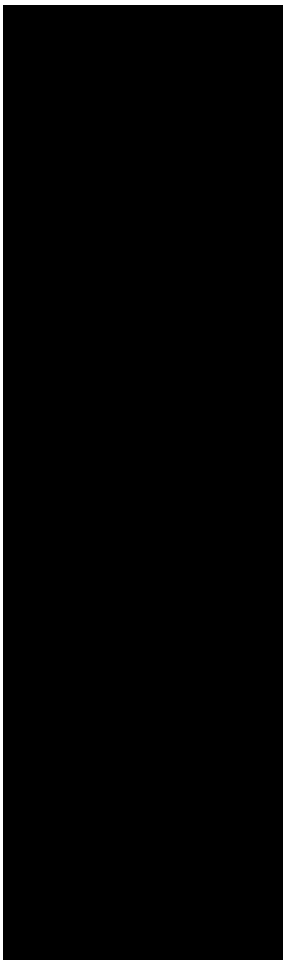
The discussion of additional lighting started as a safety issue with several of the substations. General lighting was insufficient to safely manuver around station equipment.

The only issue may be the balance of fixed verses portable lighting that can be used in an emergency repair scenario. Additional outlets will be installed to accommodate portable lighting in time of outage repairs. Each station will be different and therefore each of the substations will require a different scope.

Project Description:

This project has been created to handle various substation lighting upgrades. There has been discussions of safety issues due to poor lighting when entering a substation at night. The goal of this project is to address the growing night time emergency work condition concerns.

To upgrade the station lighting to current standards. The stations that are included on this project are:



The issue of additional lighting has been a safety discussion.

Other Considerations:

It was discussed to provide portable lighting when needed. The field guys pushed back on this.
With this work of trenching new conduits it may be prudent to install additional cables to support video surveillance devices.

Revision / ACT Comments:

If we don't do this project, what will happen?

Environmental

Water Pollution: No Change Soil Contamination: No Change Natural Habitats: No Change

Alternatives considered based on Environmental Impact or Description of Aspects Oil Spill Risks Considered? ☐

Safety Concerns With This Project? ☐

Explain:

External Stakeholders

Customer Impact / Involvement

Cust. Impacted:
Crit. Cust. Impacted:
Adjoining Property Owner Consent Required: ☐
Other Utility Pole Custodian Area: ☐
State Highway Permit Required: ☐

Approx. Pole Count (NU):
Approx. Pole Count (Other):
Town Hearing Required: ☐
Easement Required: ☐

Relocation / New Service

New Srvc. Contact:
Customer Type:
Request Number:

Requestor Type:
State Highway Project #:
Route #:

Segment CS00021-01

General Information

Segment:	1 - Bristol			Status:	Prelim Design Approved
Segment Type:	S/S - GENERAL MODERNIZATION	Town:	[redacted]	Budget Year:	2016
Work Type:	Other	Trimming Required:	☐	In Service Date:	10/31/2016
Description:	Upgrade exsisting failed and failing substation lighting systems. Most of the upgrades will be the replacement of older fixtures. Some of the lighting upgrades will require additional circuits along with new trenches and conduit. Fourteen new quad LED spot light Fixtures to be installed on existing lighting poles				

Itemized Work List

ID	Major Grid	Minor Grid	Description of Work to be Performed

Segment CS00021-01

Estimate

	Preliminary Estimate Summary
Revision Number:	0
Contingency:	0.00 %
SubTotal:	$77,658
Contingency Amount:	$0
Estimate:	$77,658
Reimbursement:	$0
Net Amount:	**$77,658**
Description:	Substation lighting improvements

Item Description	CU	$ / Per	Qty	Amount
OTHER	13-ALL14	[redacted]	[redacted]	$77,658.00
OTHER [redacted]				

Associated / Impacted Devices

Status	Type / SysID	Street / Cross St	Structure / Town	Circuit	Map	Cust	Notes

Segment CS00021-02

General Information

Segment: 2 - [redacted] upgrades Status: Prelim Design Approved

Segment Type: S/S - GENERAL MODERNIZATION Town: [redacted] Budget Year: 2016

Work Type: Other Trimming Required: ☐ In Service Date: 10/31/2016

Description: Replacement of existing yard lighting fixtures with newer more efficient fixtures.
Replacement of 18 new light Fixtures to be installed on existing lighting poles/structures
Addition of 5 new Street Light Type fixtures on existing poles/structures.

Itemized Work List

ID	Major Grid	Minor Grid	Description of Work to be Performed

Segment CS00021-02

Estimate

	Preliminary Estimate Summary
Revision Number:	0
Contingency:	0.00 %
SubTotal:	$66,365
Contingency Amount:	$0
Estimate:	$66,365
Reimbursement:	$0
Net Amount:	**$66,365**

Description:

Item Description	CU	$ / Per	Qty	Amount
OTHER	14-ALL14	[redacted]	[redacted]	$66,365.00
OTHER				

Associated / Impacted Devices

Status	Type / SysID	Street / Cross St	Structure / Town	Circuit	Map	Cust	Notes

Segment CS00021-03

General Information

Segment:	3 - [redacted] upgrades			Status:	Prelim Design Approved
Segment Type:	S/S - GENERAL MODERNIZATION	Town:	[redacted]	Budget Year:	2016
Work Type:	Other	Trimming Required:	☐	In Service Date:	10/31/2016
Description:	Replacement of existing lighting fixtures; Three new quad LED spot light Fixtures to be installed on existing lighting poles Addition of one new Street light type on a new wooden pole. Installation of a new 15kVA station service transformer				

Itemized Work List

ID	Major Grid	Minor Grid	Description of Work to be Performed

Segment CS00021-03

Estimate

	Preliminary Estimate Summary
Revision Number:	0
Contingency:	0.00 %
SubTotal:	$68,091
Contingency Amount:	$0
Estimate:	$68,091
Reimbursement:	$0
Net Amount:	**$68,091**

Description: Upgrades costs

Item Description	CU	$ / Per	Qty	Amount
OTHER	14-ALL14	[redacted]	[redacted]	$68,091.00
OTHER				

Associated / Impacted Devices

Status	Type / SysID	Street / Cross St	Structure / Town	Circuit	Map	Cust	Notes

Segment CS00021-04

General Information

Segment:	4 - [redacted]-Upgrades			Status:	Prelim Design Approved
Segment Type:	S/S - GENERAL MODERNIZATION	Town:	[redacted]	Budget Year:	2015
Work Type:	Other	Trimming Required:	☐	In Service Date:	12/31/2015
Description:	Two new quad LED spot light Fixtures to be installed on existing control house. Two new street light type lighting fixtures, including wooden poles.				

Itemized Work List

ID	Major Grid	Minor Grid	Description of Work to be Performed

Segment CS00021-04

Estimate

	Preliminary Estimate Summary
Revision Number:	0
Contingency:	0.00 %
SubTotal:	$89,180
Contingency Amount:	$0
Estimate:	$89,180
Reimbursement:	$0
Net Amount:	**$89,180**

Description: Lighting upgrades

Item Description	CU	$ / Per	Qty	Amount
OTHER	14-ALL14	[redacted]	[redacted]	$89,180.00
OTHER				

Associated / Impacted Devices

Status	Type / SysID	Street / Cross St	Structure / Town	Circuit	Map	Cust	Notes

Segment CS00021-05

General Information

Segment: 5 - [redacted] - Upgrades Status: Prelim Design Approved

Segment Type: S/S - GENERAL MODERNIZATION Town: [redacted] Budget Year: 2016

Work Type: Other Trimming Required: ☐ In Service Date: 10/31/2016

Description: Replacement of 12 new quad LED spot light Fixtures to be installed on existing lighting poles/structures
Replacement of two new Street light type fixtures on existing poles.

Itemized Work List

ID	Major Grid	Minor Grid	Description of Work to be Performed

Segment CS00021-05

Estimate

	Preliminary Estimate Summary
Revision Number:	0
Contingency:	0.00 %
SubTotal:	$68,782
Contingency Amount:	$0
Estimate:	$68,782
Reimbursement:	$0
Net Amount:	**$68,782**

Description: SS Lighting Upgrades

Item Description	CU	$ / Per	Qty	Amount
OTHER	14-ALL14	[redacted]	[redacted]	$68,782.00
OTHER				

Associated / Impacted Devices

Status	Type / SysID	Street / Cross St	Structure / Town	Circuit	Map	Cust	Notes

Segment CS00021-06

General Information

Segment: 6 - [redacted] - Upgrds Status: Prelim Design Approved

Segment Type: S/S - GENERAL MODERNIZATION Town: [redacted] Budget Year: 2015

Work Type: Other Trimming Required: ☐ In Service Date: 12/31/2015

Description:

Itemized Work List

ID	Major Grid	Minor Grid	Description of Work to be Performed

Segment CS00021-06

Estimate

	Preliminary Estimate Summary
Revision Number:	0
Contingency:	0.00 %
SubTotal:	$65,196
Contingency Amount:	$0
Estimate:	$65,196
Reimbursement:	$0
Net Amount:	**$65,196**

Description:

Item Description	CU	$ / Per	Qty	Amount
OTHER	14-ALL14	[redacted]	[redacted]	$65,196.00
OTHER				

Associated / Impacted Devices

Status	Type / SysID	Street / Cross St	Structure / Town	Circuit	Map	Cust	Notes

Segment CS00021-07

General Information

Segment: 7 - [redacted] - Upgrades Status: Prelim Design Approved

Segment Type: S/S - GENERAL MODERNIZATION Town: [redacted] Budget Year: 2015

Work Type: Other Trimming Required: ☐ In Service Date: 12/31/2015

Description: Two new quad LED spot light Fixtures to be installed on existing lighting poles
Addition of two new Street light type on existing structure.
Addition of two new Street light type on existing wooden poles, new triplex wire from the street to the wooden poles

Itemized Work List

ID	Major Grid	Minor Grid	Description of Work to be Performed

Segment CS00021-07

Estimate

	Preliminary Estimate Summary
Revision Number:	0
Contingency:	0.00 %
SubTotal:	$82,142
Contingency Amount:	$0
Estimate:	$82,142
Reimbursement:	$0
Net Amount:	**$82,142**

Description: SS lighting upgrades

Item Description	CU	$ / Per	Qty	Amount
OTHER	14-ALL14	[redacted]	[redacted]	$82,142.00
OTHER				

Associated / Impacted Devices

Status	Type / SysID	Street / Cross St	Structure / Town	Circuit	Map	Cust	Notes

Segment CS00021-08

General Information

Segment: 8 - [redacted] - Upgrades Status: Prelim Design Approved

Segment Type: S/S - GENERAL MODERNIZATION Town: [redacted] Budget Year: 2015

Work Type: Other Trimming Required: ☐ In Service Date: 12/31/2015

Description: Eight new quad LED spot light Fixtures to be installed on existing lighting poles
Two new street light type lighting fixtures.

Itemized Work List

ID	Major Grid	Minor Grid	Description of Work to be Performed

Segment CS00021-08

Estimate

	Preliminary Estimate Summary
Revision Number:	0
Contingency:	0.00 %
SubTotal:	$94,516
Contingency Amount:	$0
Estimate:	$94,516
Reimbursement:	$0
Net Amount:	**$94,516**

Description: SS Lighting Upgrades

Item Description	CU	$ / Per	Qty	Amount
OTHER	14-ALL14	[redacted]	[redacted]	$94,516.00
OTHER				

Associated / Impacted Devices

Status	Type / SysID	Street / Cross St	Structure / Town	Circuit	Map	Cust	Notes

Segment CS00021-09

General Information

Segment:	9 - [redacted] - Upgrades			Status:	Prelim Design Approved
Segment Type:	S/S - GENERAL MODERNIZATION	Town:	[redacted]	Budget Year:	2015
Work Type:	Other	Trimming Required:	☐	In Service Date:	12/31/2015
Description:	Replacement of 15 new quad LED spot light Fixtures to be installed on existing lighting poles/structures Replacement of one new Street light type on existing poles.				

Itemized Work List

ID	Major Grid	Minor Grid	Description of Work to be Performed

Segment CS00021-09

Estimate

	Preliminary Estimate Summary
Revision Number:	0
Contingency:	0.00 %
SubTotal:	$80,135
Contingency Amount:	$0
Estimate:	$80,135
Reimbursement:	$0
Net Amount:	**$80,135**

Description: SS Lighting Upgrades

Item Description	CU	$ / Per	Qty	Amount
OTHER	14-ALL14	[redacted]	[redacted]	$80,135.00
OTHER				

Associated / Impacted Devices

Status	Type / SysID	Street / Cross St	Structure / Town	Circuit	Map	Cust	Notes

Segment CS00021-10

General Information

Segment: 10 - [redacted] - Upgrades Status: Prelim Design Approved

Segment Type: S/S - GENERAL MODERNIZATION Town: [redacted] Budget Year: 2015

Work Type: Other Trimming Required: ☐ In Service Date: 12/31/2015

Description: Replacement of nine new quad LED spot light Fixtures to be installed on existing lighting poles/structures
Replacement of six new Street light type on existing poles.
Installation of a new wiring to the poles in existing conduits if needed.

Itemized Work List

ID	Major Grid	Minor Grid	Description of Work to be Performed

Segment CS00021-10

Estimate

	Preliminary Estimate Summary
Revision Number:	0
Contingency:	0.00 %
SubTotal:	$84,919
Contingency Amount:	$0
Estimate:	$84,919
Reimbursement:	$0
Net Amount:	**$84,919**

Description: SS Lighting Upgrades

Item Description	CU	$ / Per	Qty	Amount
OTHER	14-ALL14	[redacted]	[redacted]	$84,919.00
OTHER				

Associated / Impacted Devices

Status	Type / SysID	Street / Cross St	Structure / Town	Circuit	Map	Cust	Notes

Segment CS00021-11

General Information

Segment: 11 - [redacted] - Upgrades Status: Prelim Design Approved

Segment Type: S/S - GENERAL MODERNIZATION Town: [redacted] Budget Year: 2015

Work Type: Other Trimming Required: ☐ In Service Date: 12/31/2015

Description: Replacement of 30 new light Fixtures to be installed on existing lighting poles/structures
Replacement of 4 new Street light type fixtures on existing poles/Structures

Itemized Work List

ID	Major Grid	Minor Grid	Description of Work to be Performed

Segment CS00021-11

Estimate

	Preliminary Estimate Summary
Revision Number:	0
Contingency:	0.00 %
SubTotal:	$84,945
Contingency Amount:	$0
Estimate:	$84,945
Reimbursement:	$0
Net Amount:	**$84,945**

Description: SS Lighting Upgrades

Item Description	CU	$ / Per	Qty	Amount
OTHER	14-ALL14	[redacted]	[redacted]	$84,945.00
OTHER				

Associated / Impacted Devices

Status	Type / SysID	Street / Cross St	Structure / Town	Circuit	Map	Cust	Notes

Segment CS00021-12

General Information

Segment: 12 - [redacted] - Upgrades Status: Prelim Design Approved

Segment Type: S/S - GENERAL MODERNIZATION Town: [redacted] Budget Year: 2016

Work Type: Other Trimming Required: ☐ In Service Date: 10/31/2016

Description: Replacement of 22 new quad LED spot light Fixtures to be installed on existing lighting poles/structures
Replacement of one new Street light type fixtures on existing poles.

Itemized Work List

ID	Major Grid	Minor Grid	Description of Work to be Performed

Segment CS00021-12

Estimate

	Preliminary Estimate Summary
Revision Number:	0
Contingency:	0.00 %
SubTotal:	$90,540
Contingency Amount:	$0
Estimate:	$90,540
Reimbursement:	$0
Net Amount:	**$90,540**

Description: SS Lighting Upgrades

Item Description	CU	$ / Per	Qty	Amount
OTHER	14-ALL14	[redacted]	[redacted]	$90,540.00
OTHER				

Associated / Impacted Devices

Status	Type / SysID	Street / Cross St	Structure / Town	Circuit	Map	Cust	Notes

Segment CS00021-13

General Information

Segment:	13 - [redacted] - Upgrades			Status:	Prelim Design Approved
Segment Type:	S/S - GENERAL MODERNIZATION	Town:	[redacted]	Budget Year:	2016
Work Type:	Other	Trimming Required:	☐	In Service Date:	10/31/2016
Description:	Replacement of 24 new quad LED spot light Fixtures to be installed on existing lighting poles/structures Replacement of 3 new Street light type fixtures on existing poles.				

Itemized Work List

ID	Major Grid	Minor Grid	Description of Work to be Performed

Segment CS00021-13

Estimate

	Preliminary Estimate Summary
Revision Number:	0
Contingency:	0.00 %
SubTotal:	$94,280
Contingency Amount:	$0
Estimate:	$94,280
Reimbursement:	$0
Net Amount:	**$94,280**

Description: SS Lighting Upgrades

Item Description	CU	$ / Per	Qty	Amount
OTHER	14-ALL14	[redacted]	[redacted]	$94,280.00
OTHER				

Associated / Impacted Devices

Status	Type / SysID	Street / Cross St	Structure / Town	Circuit	Map	Cust	Notes

Segment CS00021-14

General Information

Segment: 14 - [redacted] - Upgrades Status: Prelim Design Approved

Segment Type: S/S - GENERAL MODERNIZATION Town: [redacted] Budget Year: 2016

Work Type: Other Trimming Required: ☐ In Service Date: 10/31/2016

Description: Addition of 12 new light Fixtures to be installed on existing structures
Addition of 500 new control conduit to supply the new light fixtures with 120VAC.

Itemized Work List

ID	Major Grid	Minor Grid	Description of Work to be Performed

Segment CS00021-14

Estimate

	Preliminary Estimate Summary
Revision Number:	0
Contingency:	0.00 %
SubTotal:	$177,718
Contingency Amount:	$0
Estimate:	$177,718
Reimbursement:	$0
Net Amount:	**$177,718**

Description: SS Lighting upgrades

Item Description	CU	$ / Per	Qty	Amount
OTHER	14-ALL14	[redacted]	[redacted]	$177,718.00
OTHER				

Associated / Impacted Devices

Status	Type / SysID	Street / Cross St	Structure / Town	Circuit	Map	Cust	Notes

Segment CS00021-15

General Information

Segment: 15 - [redacted] - Upgrades Status: Prelim Design Approved

Segment Type: S/S - GENERAL MODERNIZATION Town: [redacted] Budget Year: 2016

Work Type: Other Trimming Required: ☐ In Service Date: 10/31/2016

Description: Five new quad LED spot light Fixtures to be installed on existing lighting poles
Four new street light type fixtures to be installed on to top of the existing small shed.

Itemized Work List

ID	Major Grid	Minor Grid	Description of Work to be Performed

Segment CS00021-15

Estimate

	Preliminary Estimate Summary
Revision Number:	0
Contingency:	0.00 %
SubTotal:	$76,565
Contingency Amount:	$0
Estimate:	$76,565
Reimbursement:	$0
Net Amount:	**$76,565**

Description: SS Lighting Upgrades

Item Description	CU	$ / Per	Qty	Amount
OTHER	14-ALL14	[redacted]	[redacted]	$76,565.00
OTHER				

Associated / Impacted Devices

Status	Type / SysID	Street / Cross St	Structure / Town	Circuit	Map	Cust	Notes

Segment CS00021-16

General Information

Segment:	16 - [redacted] - Upgrades			Status:	Prelim Design Approved
Segment Type:	S/S - GENERAL MODERNIZATION	Town:	[redacted]	Budget Year:	2016
Work Type:	Other	Trimming Required:	☐	In Service Date:	10/31/2016
Description:	Replacement of 10 new light Fixtures to be installed on existing lighting poles/structures				

Itemized Work List

ID	Major Grid	Minor Grid	Description of Work to be Performed

Segment CS00021-16

Estimate

	Preliminary Estimate Summary
Revision Number:	0
Contingency:	0.00 %
SubTotal:	$37,395
Contingency Amount:	$0
Estimate:	$37,395
Reimbursement:	$0
Net Amount:	**$37,395**

Description: SS Lighting Upgrades

Item Description	CU	$ / Per	Qty	Amount
OTHER	14-ALL14	[redacted]	[redacted]	$37,395.00
OTHER				

Associated / Impacted Devices

Status	Type / SysID	Street / Cross St	Structure / Town	Circuit	Map	Cust	Notes

Segment CS00021-17

General Information

Segment: 17 - [redacted] Upgrades Status: Prelim Design Approved

Segment Type: S/S - GENERAL MODERNIZATION Town: [redacted] Budget Year: 2015

Work Type: Other Trimming Required: ☐ In Service Date: 12/31/2015

Description: Replacement of ten new quad LED spot light Fixtures to be installed on existing lighting poles/structures
Replacement of two new Street light type on existing poles.
Installation of a new wooden pole at the gate with a new street light type fixture.

Itemized Work List

ID	Major Grid	Minor Grid	Description of Work to be Performed

Segment CS00021-17

Estimate

	Preliminary Estimate Summary
Revision Number:	0
Contingency:	0.00 %
SubTotal:	$91,577
Contingency Amount:	$0
Estimate:	$91,577
Reimbursement:	$0
Net Amount:	**$91,577**

Description: SS Lighting Upgrades

Item Description	CU	$ / Per	Qty	Amount
OTHER	14-ALL14	[redacted]	[redacted]	$91,577.00
OTHER				

Associated / Impacted Devices

Status	Type / SysID	Street / Cross St	Structure / Town	Circuit	Map	Cust	Notes