EVERSOURCE

Project Approval Form

Project Title: [redacted]	**Project Number: CD01851**
Date Prepared: 08/25/2023	**Company:** Eversource CT
Organization: Distribution Engineering	**Project Category:** SMART SWITCHES PROGRAM
Project Initiator: [redacted]	**Project Type:** Specific
Initiating Organization: Distribution	**Capital Investment part of original Op Plan:** Yes
Project Manager: [redacted]	**Emergency Related Request?** No
Project Sponsor: [redacted]	**Facility Type** (check all that apply)**:** ☐ PTF ☐ non-PTF ☒ Distribution ☐ N/A (General Plant)
Required in service date: 12/31/2023	
Total Capital Request: $280.9K	**Authorization Type:** Full Funding

1. Executive Summary

Project CD01851 is being established to address large customer zones on the [redacted]

- [redacted]

Project CD01851 proposes to [redacted]

- [redacted]

FULL FUNDING.

The full funding estimate is 19 percent over of the partial funding estimate of $241K. The project was completed by doc crews.

2. Project Cost Summary

Note: Dollar values are in thousands.

Capital Costs	2023	Year 2	Year 3+	Total
Internal Labor and Construction Equipment	3.7	0.0	0.0	3.7
Outside Services	62.3	0.0	0.0	62.3
Materials	141.4	0.0	0.0	141.4
Removals	5.0	0.0	0.0	5.0
Risk and Contingency	5.5	0.0	0.0	5.5
Other	0.0	0.0	0.0	0.0
Subtotal	**217.9**	**0.0**	**0.0**	**217.9**

Indirect Capital Costs	Year 1	Year 2	Year 3+	Total
Indirects/Overheads (including benefits)	62.4	0.0	0.0	62.4
Capitalized interest or AFUDC, if any	0.7	0.0	0.0	0.7
Subtotal	**63.1**	**0.0**	**0.0**	**63.1**

Total Capital Costs (Gross)	**280.9**	**0.0**	**0.0**	**280.9**
Less Total Customer Contribution	**0.0**	**0.0**	**0.0**	**0.0**
Total O&M Project Costs	**6.5**	**0.0**	**0.0**	**6.5**
Project Costs (Net of Reimbursement)	**280.9**	**0.0**	**0.0**	**280.9**

3. Technical Justification

Background, Project Need/Justification, and Project Scope

a. Background

The project was created to reduce large customer zones to less than 500 customers to improve reliability.

b. Project Need

[redacted]

c. Project Scope

The scope of this project is as follows:

[redacted]

4. Alternatives Considered

Project Option Comparison

	Option		
[redacted]			
Capital Cost	$280.9K	$0	
Expense Cost	$6.5K	$0	
Total Cost	$287.4K	$0	
Total Cost / MVA added	$/MVA	NA	
Total Cost / CM Saved	$/CM	NA	
Total Cost / CI Saved	$/CI	NA	
Preferred option	X		

There was no other option to reduce the three large customer zone sizes.

5. Project Schedule

Add any additional milestones that are pertinent to the project.

Milestone/Phase Name	Estimated Date
Partial Approval	January 2022
100% Detailed Engineering Completion	November 2022
Construction Start	January 2023
In Service Date	December 2023

6. Regulatory Decisions

7. Codes and Standards

8. Risk and Contingencies

Contingencies:

Risk Mitigation:

Risk Event	Risk Horizon	Likelihood of Occurrence	Risk Mitigation
Actual cost higher than estimated due to scope changes.	2023	Low	Included contingency costs in the funding request. Perform detailed Field Analysis and walk down in project development to avoid potential issues.
Internal construction resources not available to perform the work.	2023	Low	Plan internal resources to perform the work. Use competitive bidding to ensure lowest outside labor cost.
Internal engineering resources not available to perform the work.	2022	Low	Plan internal resources to perform the work. Use competitive bidding to ensure lowest outside labor cost.
Materials Shortage or long lead times	2023	Low	Pre-order long lead time material; minimize the use of non-standard and non-stocked material.
Storm delays	2023	Low	If storm activity delays work, we may be forced to use external resources.
System abnormal configuration	2023	Low	Schedule work to minimize system abnormal time. Install temporary bypasses/equipment if system will be abnormal for extended periods.

9. References

References
1. NA
2.
3.
4.
5.

10. Attachments (One Line Diagrams, Images, etc.)

Attachment	Included in Submittal?
A. Cost Estimate	*YES*
B. P6 Schedule	*NO*
C. Geographic Map	*YES*
D. System and Station One-Lines	*YES*
E. Load Sheets	*YES*
F. Outages	*YES*
G. Partial PAF	*YES*

A. Cost Estimate.

Segment One.

CD01851-01

General Information

Segment: 1 - Install 2 Vipers & 1 SS
Status: Prelim Design Approved
Segment Type: SECTIONALIZING - OH
Town: BRISTOL
Budget Year: 2023
Work Type: BB-Sctnlzng-Reclosers
Trimming ☐
In Service Date: 12/31/2023
Description: [redacted]

Itemized Work List

ID	Major Grid	Minor Grid	Description of Work to be Performed

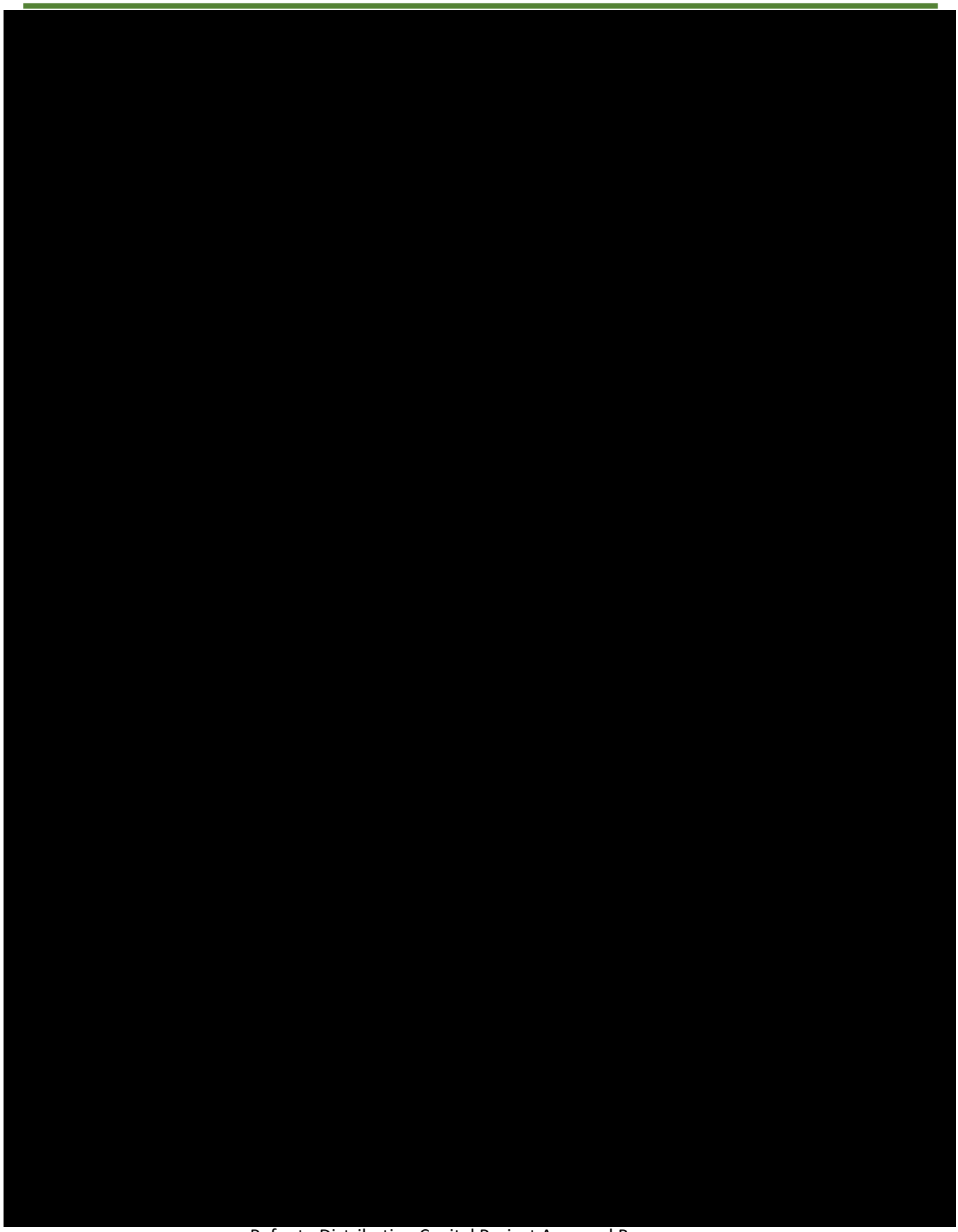
Estimate

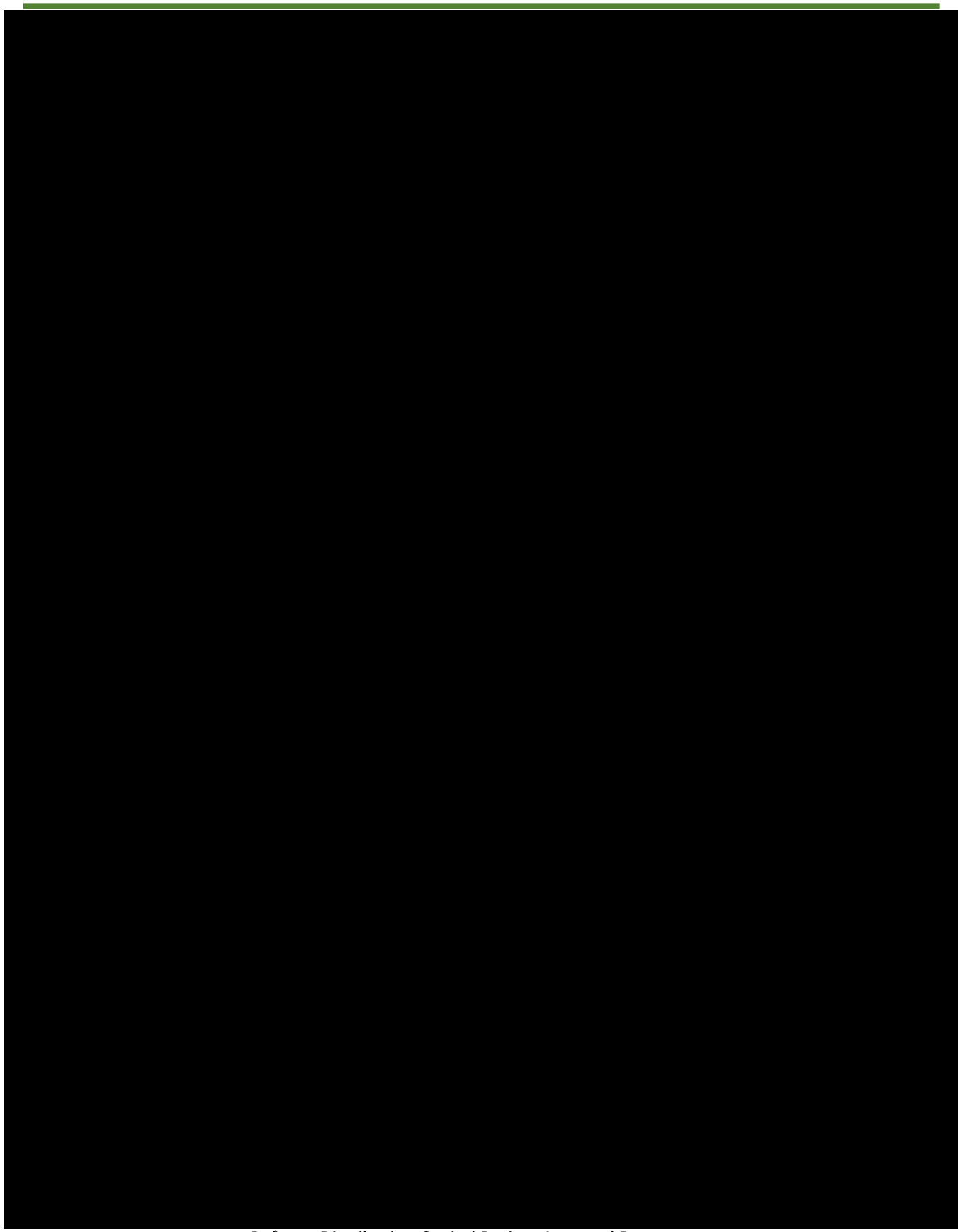
Preliminary Estimate Summary

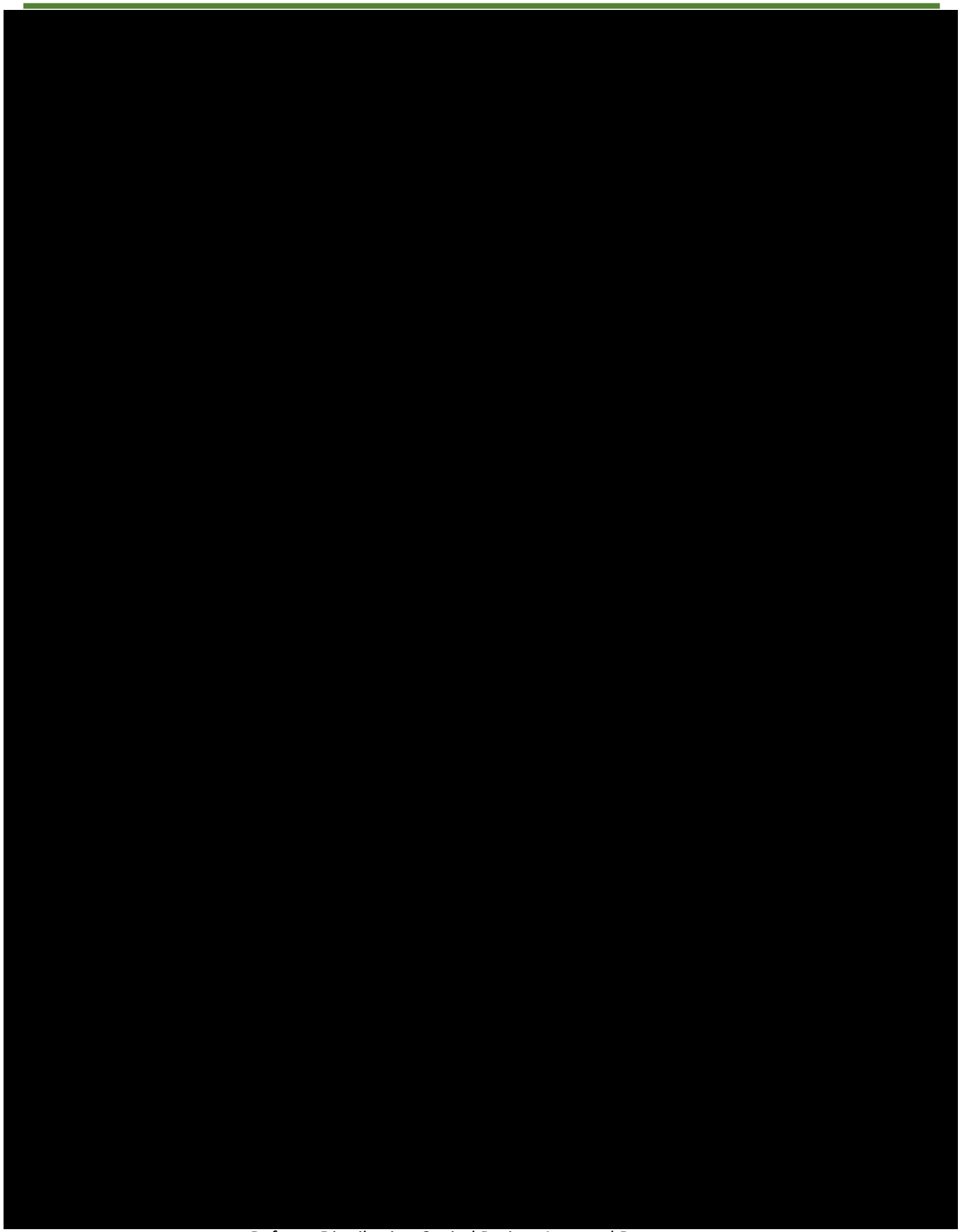
Revision Number:	1
Contingency:	28.00%
SubTotal:	$188,529
Contingency Amount:	$52,788
Estimate:	$241,317
Reimbursement:	$0
Net Amount:	**$241,317**

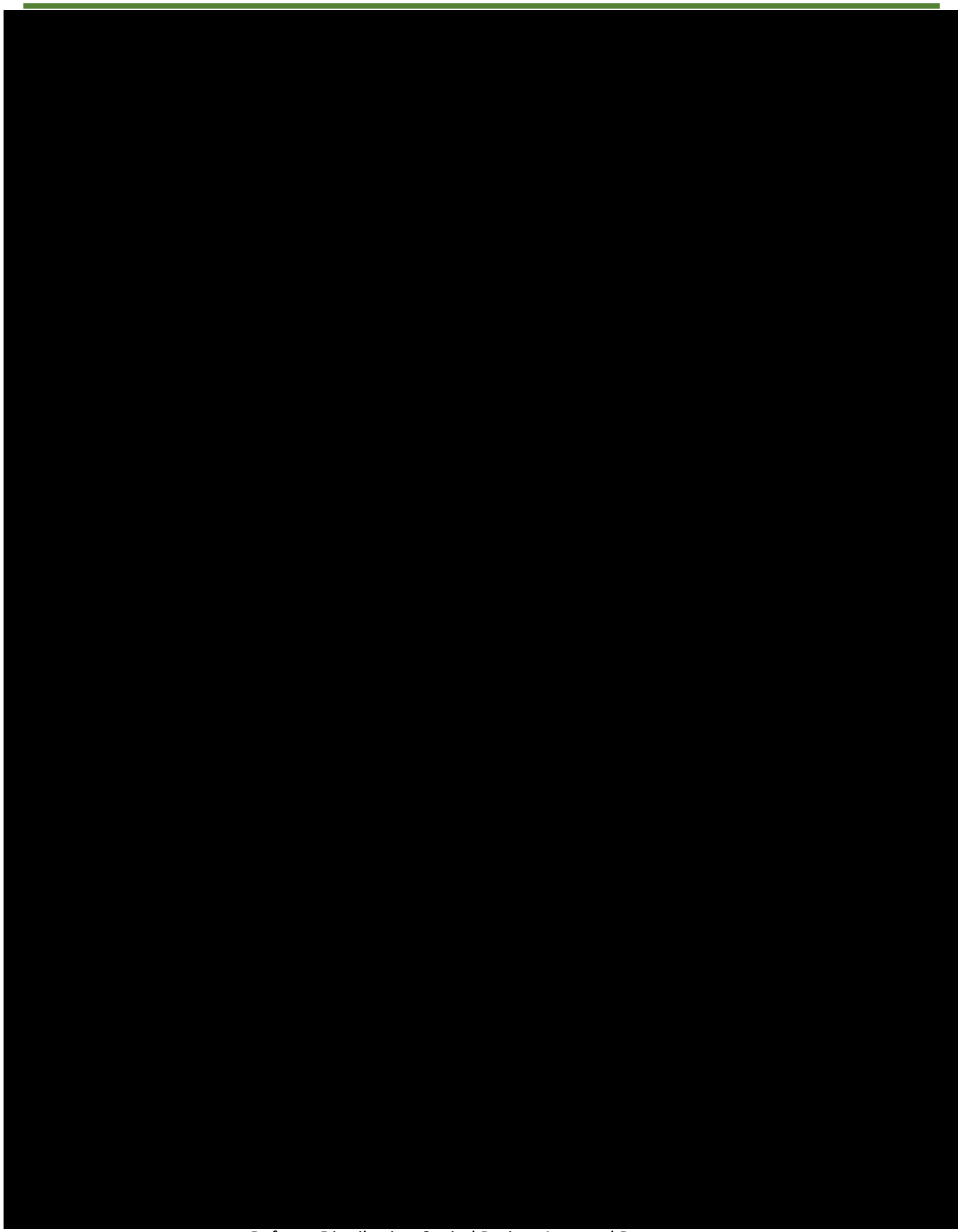
Description:

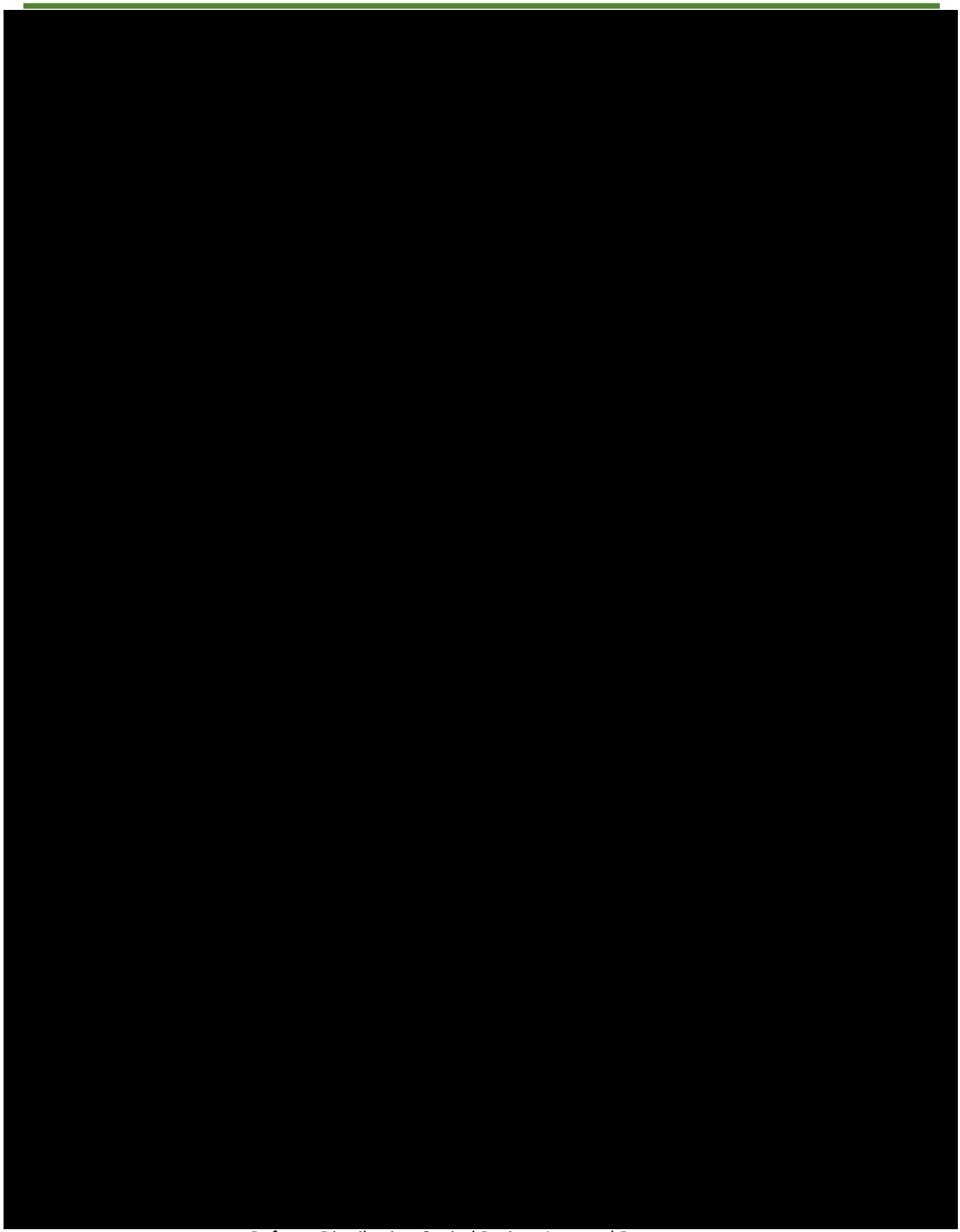
Item Description	CU		Amount
SWITCHING OH/DB/UG - SWITCHING NonNetwork - Average	16-ALL17	[redacted]	$3,509.60
TRAFFIC OH/DB/UG - Traffic Control - Flagger	16-ALL19		$3,000.00
SECTIONALIZE OH - Recloser Control - setting changes only	16-OH39A		$4,885.60
SECTIONALIZE OH - Cutouts or Arresters - 3ph Install 100K fuse on pole 8528 on King St.	16-OH20		$2,315.20
SECTIONALIZE OH - Recloser - 3ph Install 2 SS, one on pole 12015 and the other on pole 7797	16-OH38		$95,979.20
SECTIONALIZE OH-Vertical Disconnect Switches-600/900 amp 3-1ph Install 600A disconnect for each SS.	16-OH43		$30,849.60
SECTIONALIZE OH - Recloser - 3ph Install a SS on pole 8525 on King St.	16-OH38		$47,989.60

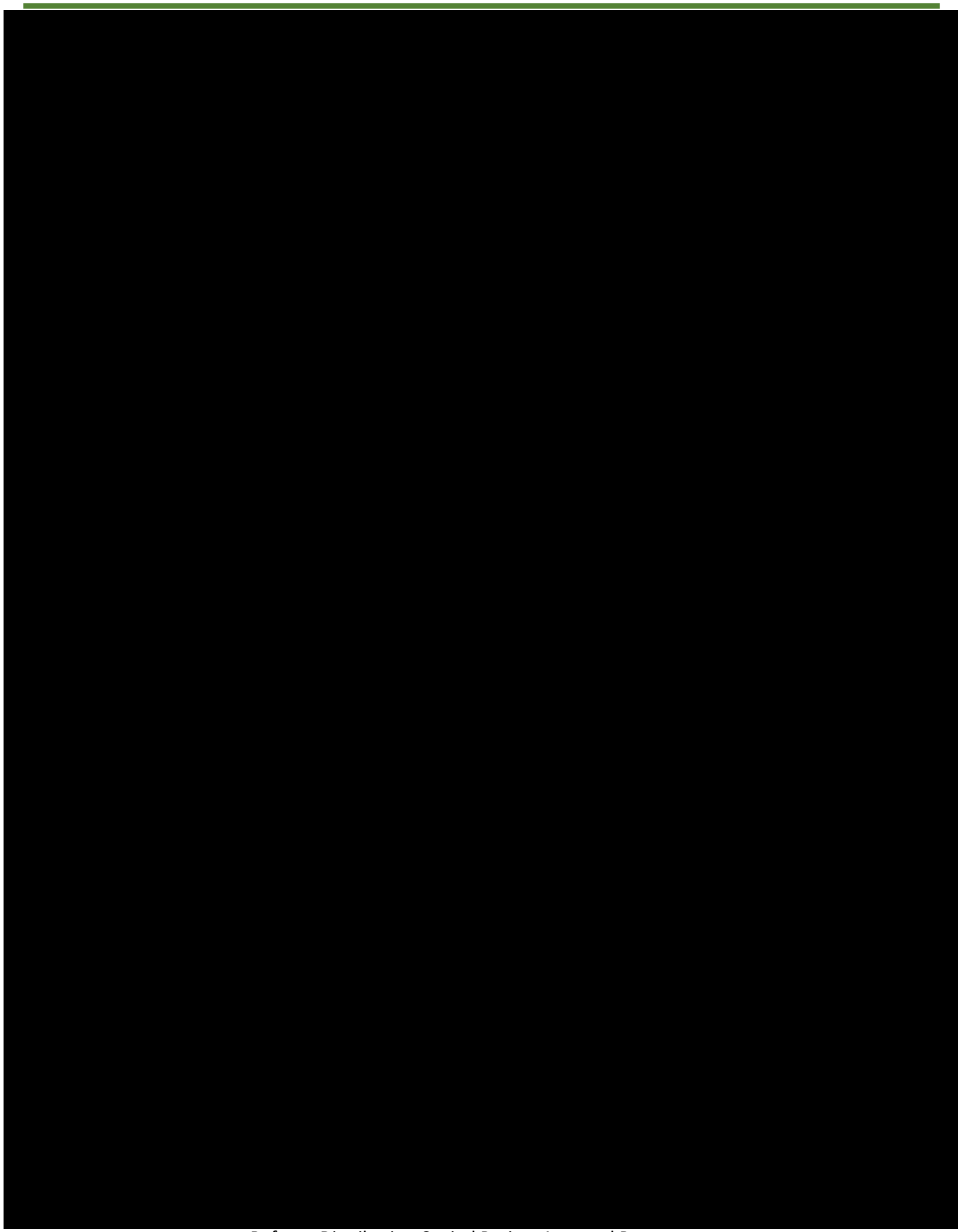












G. Partial PAF

Operations Project Authorization Form

Date Prepared: January 6, 2022	**Project Title:** [redacted]
Company/ies: Eversource CT	**Project ID Number: CD01851**
Organization: Distribution Electric	**Class(es) of Plant: Distribution**
Project Initiator: [redacted]	**Project Category: Line**
Project Manager: [redacted]	**Project Type: Smart Switches Program**
Project Sponsor: [redacted]	**Project Purpose: Break-up Large Customer Zone**
Estimated in service date: 12/31/2023	**If Transmission Project: PTF? N/A**
Eng. /Constr. Resources Budgeted? Yes	**Capital Investment Part of Original Operating Plan? Yes**
Authorization Type: Preliminary Funding	**O&M Expenses Part of the Original Operating Plan? Yes**
Total Request: $241k	

Financial Requirements:

Project Authorization

ERM: _____

FP&A: _____

Executive Summary

Project CD01851 is being established [redacted]

[redacted]

Project Costs Summary
Note: Dollar values are in thousands

	Prior Authorized	2021	2022	2023+	Totals
Capital Additions - Direct	$0	$0	$0	$135	$135
Less Customer Contribution	$0	$0	$0	$0	$0
Removals net of Salvage ____%	$0	$0	$0	$5	$5
Total - Direct Spending	$0	$0	$0	$141	$141
Capital Additions - Indirect	$0	$0	$0	$87	$87
Subtotal Request	$0	$0	$0	$228	$228
AFUDC	$0	$0	$0	$3	$3
Total Capital Request	$0	$0	$0	$231	$231
O&M	$0	$0	$0	$10	$10
Total Request	**$0**	**$0**	**$0**	**$241**	**$241**

Financial Evaluation
Note: Dollar values are in thousands

Direct Capital Costs	2021	2022	2023+	Total
Straight Time Labor	$0	$0	$18	$18
Overtime Labor	$0	$0	$4	$4
Outside Services	$0	$0	$33	$33
Materials	$0	$0	$84	$84
Other, including contingency amounts (describe)	$0	$0	$1	$1
Total Direct Costs	**$0**	**$0**	**$141**	**$141**

Indirect Capital Costs	2021	2022	2023+	Total
Indirects/Overheads (including benefits)	$0	$0	$87	$87
Capitalized interest or AFUDC, if any	$0	$0	$3	$3
Total Indirect Costs	**$0**	**$0**	**$90**	**$90**
Total Capital Costs	**$0**	**$0**	**$231**	**$231**
Less Total Customer Contribution	**$0**	**$0**	**$0**	**$0**
Total Capital Project Costs	**$0**	**$0**	**$231**	**$231**
Total O&M Project Costs	**$0**	**$0**	**$11**	**$11**
Total Project Cost	**$0**	**$0**	**$241**	**$241**

Technical Justification:

Project Need Statement

[redacted]

Project Objectives

This project's goal is to reduce the number of customers exposed to an outage event past each recloser on the [redacted] This project breaks up this large customer zone by adding multiple switches to improve reliability and reduce the customers affected during future outages.

Project Scope

The scope of this project is as follows:

- Install a smart switch with disconnect switches on Emmett St at pole 7797.
[redacted]

Major Material:

- 3 reclosers
- 1 100K Fuse
- 3 600A disconnects.

Background / Justification

The project was created as part of an initiative to improve circuit reliability by adding automatic sectionalizing devices on overhead distribution circuits.

Business Process and / or Technical Improvements:

- Decrease customer zone on device.

Alternatives Considered with Cost Estimates

Option 1 – To install 3 reclosers on the [redacted]

Option 2 – Do nothing.

Project [redacted]

Cost	$241k	$0
CM Accumulated (1-4 yrs.)	35	NA
Cost / CM Saved	61.48	NA
Cost / CI Saved	2152	NA
Preferred option	X	

Schedule

Milestone/Phase Name	Estimated Completion Date
Preliminary Approval	January 2022
Detailed Design	November 2022
Construction Start Date	January 2023
Construction End Date	December 2023

Regulatory Approvals

None

Risks and Risk Mitigation Plans

Risk Event	Risk Horizon	Likelihood of Occurrence	Risk Mitigation
Actual cost higher than estimated due to scope changes.	2023	Low	Included contingency costs in the funding request. Perform detailed Field Analysis and walk down in project development to avoid potential issues.
Customer Permission / Siting Council / Municipal approvals	2023	Low	Design to minimize customer impact. Project Preplanning and customer/community outreach
Internal construction resources not available to perform the work.	2023	Low	Plan internal resources to perform the work. Use competitive bidding to ensure lowest outside labor cost.
Internal engineering resources not available to perform the work.	2022	Low	Plan internal resources to perform the work. Use competitive bidding to ensure lowest outside labor cost.
Storm delays	2023	Low	If storm activity delays work, we may be forced to use external resources.
System abnormal configuration	2023	Low	Schedule work to minimize system abnormal time. Most of this work will require system to be abnormal for any extended period.