EVERSOURCE

Supplement Authorization Form

Project Title: [redacted]	**Project Number:** CD01999
Date Prepared: 07/22/2024	**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)
Current Authorized Amount: $500.4K	**Approved In-Service Date:** 12/31/2024
Supplement Request: $217.5K	**Estimated In-Service Date:** 12/31/2024
Total Capital Request: $718K	**Authorization Type:** Supplement Request
	Reason: Cost Overage

1. Project Background

Supplemental funding is being requested for this project. The total capital request is $718K which is $217.5K (43%) more than the current authorized amount of $500.4K.

[redacted]

This project is a part of the Smart Switch Program focusing on breaking up customer zones and lowering the average number of customers impacted by a backbone interruption. This initiative was approved as part of the System Resiliency PURA Docket 12-07-06RE01.

2. Supplement Justification Overview

This project's variance of $217.5K is due to the material cost exceeding the estimate and the bid for work coming in after the estimate was created.

3. Supplement Justification Overview

CD01999's variance is largely due to higher material cost than the full funding authorization. This project was completed to scope with no variances in requested material. The material's estimate was from the prior year,

which came in lower than the actuals. The material, indirects and contingencies associated resulted in **$190K** of the variance.

The other part of the variance is due to an additional **$30K** of outside services charged to the project not accounted for in the full funding estimate due to the bid to complete this work not being in place at the time of full funding authorization.

4. Supplement Cost Summary (Project Total)

Financial Evaluation ($000's)

Capital Costs	To Date Spend	Prior Authorized	Supplemental Request	Total Request
Internal Labor and Construction Equipment	10.5	13.6	-3.1	10.5
Outside Services	101.2	71.4	29.8	101.2
Materials	387.6	222.9	164.7	387.6
Removals	12.1	43.0	-30.9	12.1
Risk and Contingency	0.0	0.0	14.1	14.1
Other	0.0	0.0	0.0	0.0
Subtotal	**511.4**	**350.9**	**174.5**	**525.4**

Indirect Capital Costs	To Date Spend	Prior Authorized	Supplemental Request	Total Request
Indirects/Overheads (including benefits)	176.6	149.5	27.1	176.6
Capitalized interest or AFUDC, if any	15.9	0.0	15.9	15.9
Subtotal	**192.5**	**149.5**	**43.0**	**192.5**
Total Capital Costs (Gross)	**703.9**	**500.4**	**217.5**	**717.9**
Less Total Customer Contribution	**0.0**	**0.0**	**0.0**	**0.0**
Project Costs (Net of Reimbursement)	**703.9**	**500.4**	**217.5**	**717.9**

5. New Total Request by Year (if applicable)

Note: If multi-year project, include actuals for current and years past, and then show forecasted spend for upcoming years.

Capital Costs	2023	2024	TOTAL
Internal Labor & Equipment	0.1	10.4	10.5
Outside Services	0.8	100.4	101.2
Materials	3.2	384.4	387.6
Removals	0.1	12.0	12.1
Risk and Contingency	0.0	14.1	14.1
Other	0.0	0.0	0.0
SUBTOTAL Direct Cost	**4.3**	**521.2**	**525.4**
Indirects / Overheads	2.9	173.7	176.6
AFUDC	0.1	15.8	15.9
SUBTOTAL Indirect Cost	**3.0**	**189.5**	**192.5**
TOTAL Capital Request	**7.3**	**710.7**	**717.9**
Less Total Customer Contribution	0.0	0.0	**0.0**
TOTAL Project Cost	**7.3**	**710.7**	**717.9**

6. Lessons Learned

Project Title: [redacted]	**Project Number:** CD01999
Date Prepared: 10/24/2023	**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: 12/31/2024	
Total Capital Request: $500.4K	**Authorization Type:** Full Funding

7. Executive Summary

Work orders have been written and full funding is being requested for this project at a cost of $500.4K, which is 88% of the approved partial funding of $570K. There is no scope change in the project.

[redacted]

[redacted]

8. Project Cost Summary

Note: Dollar values are in thousands.

Capital Costs	2024	2025	2026+	Total
Internal Labor and Construction Equipment	13.6	0.0	0.0	13.6
Outside Services	71.4	0.0	0.0	71.4
Materials	222.9	0.0	0.0	222.9
Removals	8.1	0.0	0.0	8.1
Risk and Contingency	34.9	0.0	0.0	34.9
Other	0.0	0.0	0.0	0.0
Subtotal	**350.9**	**0.0**	**0.0**	**350.9**

Indirect Capital Costs	2024	2025	2026+	Total
Indirects/Overheads (including benefits)	149.5	0.0	0.0	149.5
Capitalized interest or AFUDC, if any	0.0	0.0	0.0	0.0
Subtotal	**149.5**	**0.0**	**0.0**	**149.5**
Total Capital Costs (Gross)	**500.4**	**0.0**	**0.0**	**500.4**
Less Total Customer Contribution	**0.0**	**0.0**	**0.0**	**0.0**
Project Costs (Net of Reimbursement)	**500.4**	**0.0**	**0.0**	**500.4**

9. Technical Justification

Background, Project Need/Justification, and Project Scope

a. Background

The Smart Switch Program is a continuation of an initiative that was approved as part of the System Resiliency PURA Docket 12-07-06RE01 which is a multi-year program to improve circuit reliability by adding automatic sectionalizing devices on overhead distribution circuits. The Smart Switch Program focuses on breaking up customer zones and lowering the average number of customers impacted by a backbone interruption.

[redacted]

b. Project Need

[redacted]

[redacted] The zone is ranked 490 on the most recent Smart Switch ranking.

[redacted]

- [redacted]
- [redacted]
- [redacted]

c. Project Scope

[redacted]

- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]
- [redacted]

10. Alternatives Considered

One alternative was to "do nothing" in the [redacted]

Project Option Comparison

	Option		
[redacted]			
Authorization Type	Partial	Partial	Full
Capital Cost	$O	$488.9K	$500.4K
Expense Cost	$0	$21.4K	$21.9K
Total Cost	$0	$510.3K	$522.3K
Total Cost / CM Saved	N/A	$2.85	$2.92
Total Cost / CI Saved	N/A	$7,407.57	$7,581.81
Preferred option			X

11. Project Schedule

Add any additional milestones that are pertinent to the project

Milestone/Phase Name	Estimated Date
Partial Approval	September, 2022
100% Detailed Engineering Completion	June, 2023
Fully Funded	October, 2023
Construction Start	March, 2024
In Service Date	December, 2024

12. Regulatory Decisions

N/A

13. Codes and Standards

N/A

14. Risk and Contingencies

Risk Event	Risk Horizon	Likelihood of Occurrence	Risk Mitigation
Actual cost higher than estimated due to scope changes.	2024	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.	2024	Medium	Plan internal resources to perform the work. Use competitive bidding to ensure lowest outside labor cost.
Materials Shortage or long lead times	2024	Medium	Pre-order long lead time material; minimize the use of non-standard and non-stocked material.
Storm delays	2024	Low	If storm activity delays work, we may be forced to use external resources.
System abnormal configuration	2024	Low	Schedule work to minimize system abnormal time. Install temporary bypasses/equipment if system will be abnormal for extended periods.
Technological risks involving integration of new technology	2024	Medium	Before use of new technology ensure support of standards and manufacturer. Schedule project to accommodate for extra time or ensure new technology is not on the critical path.

15. References

References
1. N/A

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

Attachment	Included in Submittal?
A. Cost Estimate	*YES*
B. Geographic Map	*YES*
C. One-Lines	*YES*
D. Load Sheet	*YES*
E. Partial Funding PAF	*YES*

Attachment A: Cost Estimate

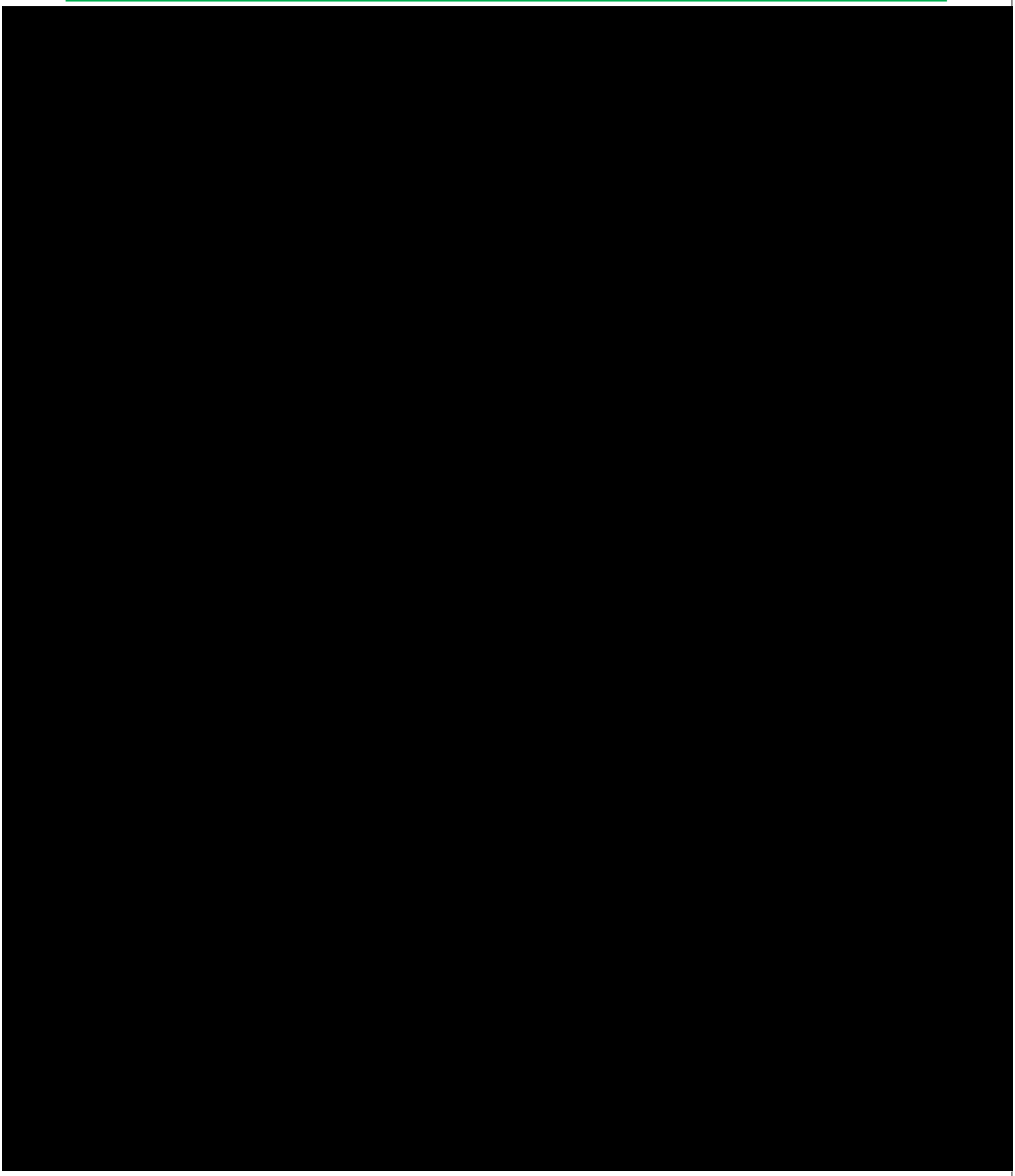
Estimate

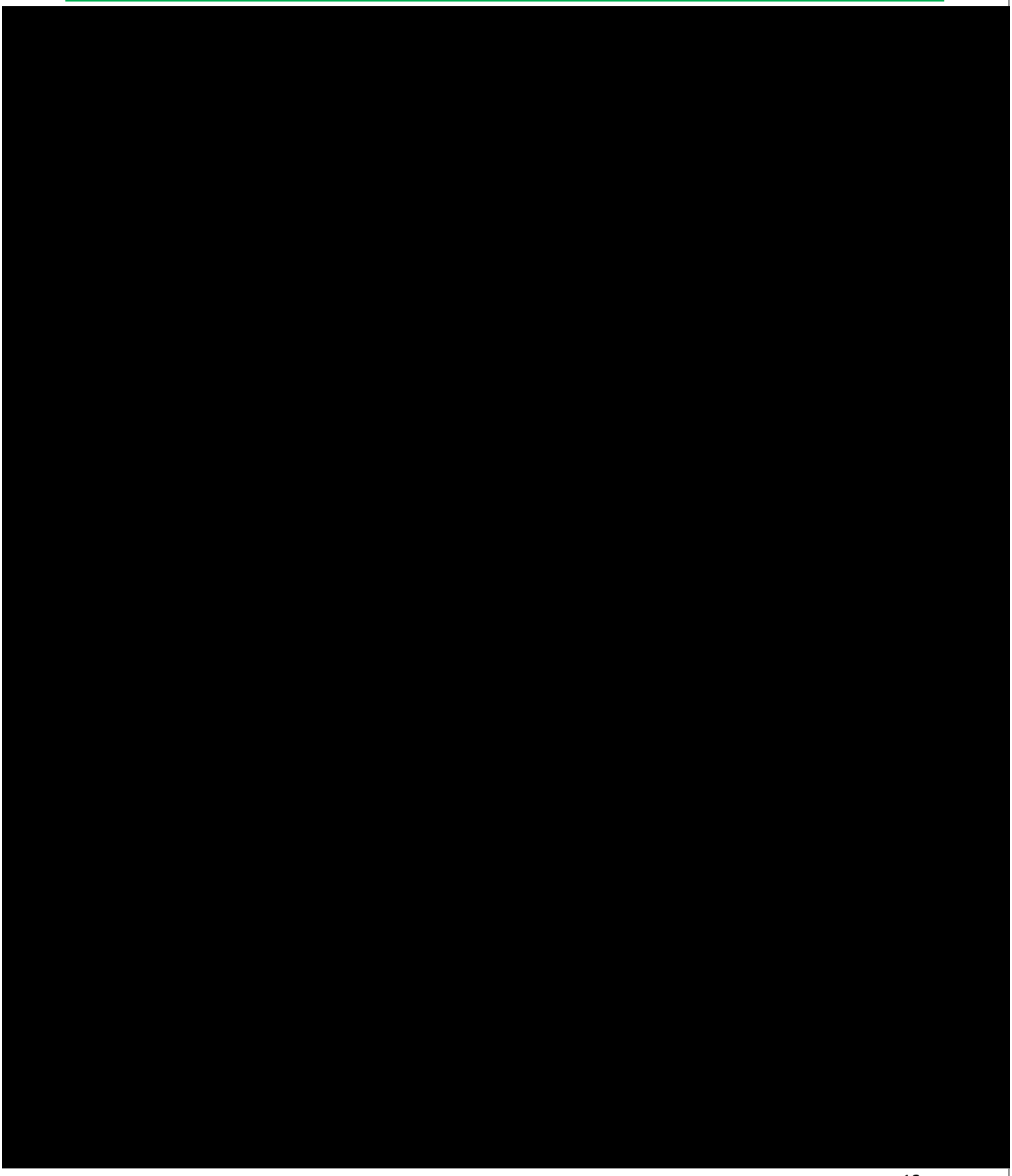
Preliminary Estimate Summary

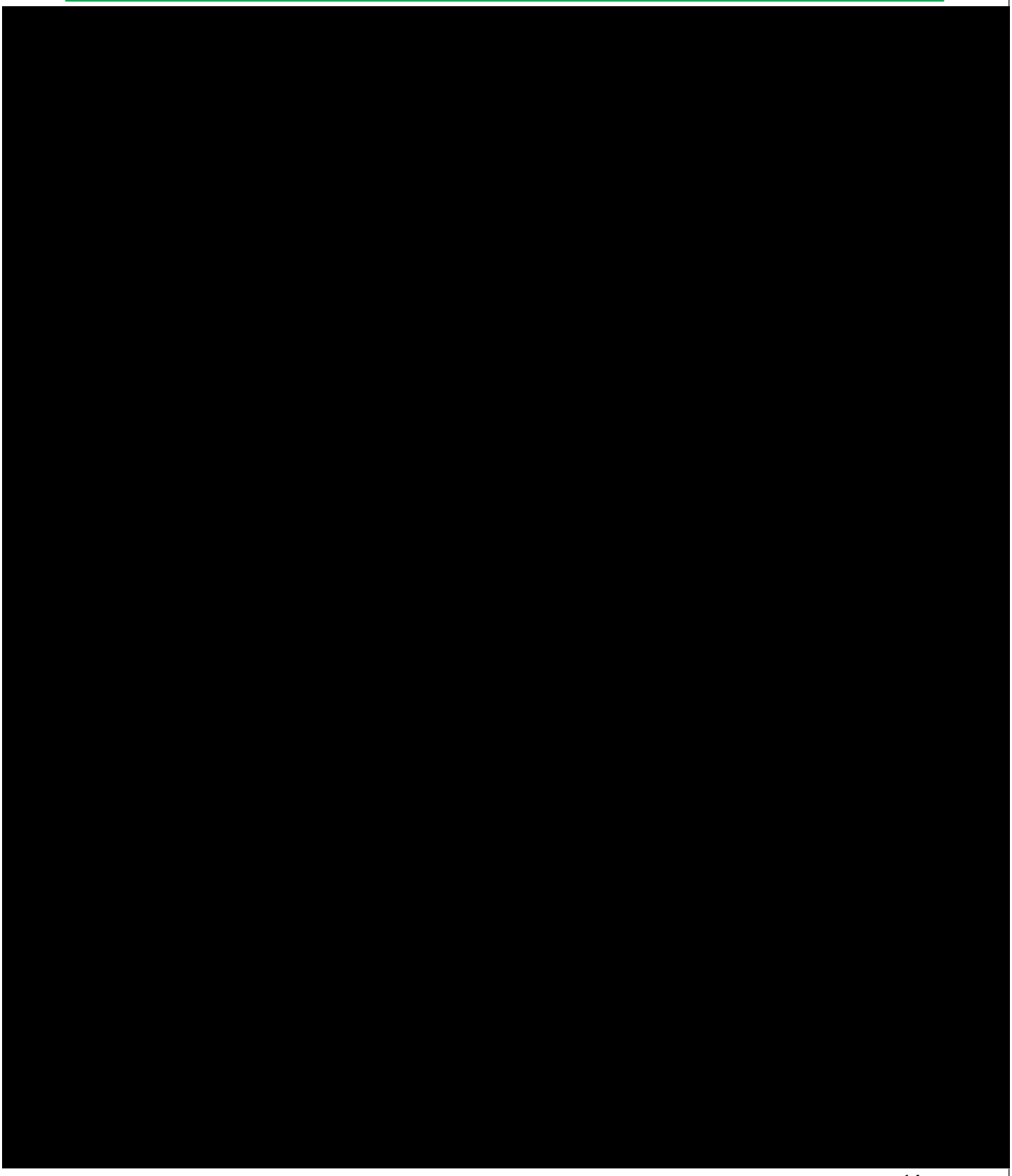
Revision Number:	0
Contingency:	28.00%
SubTotal:	$456,962
Contingency Amount:	$127,949
Estimate:	$584,911
Reimbursement:	$0
Net Amount:	**$584,911**

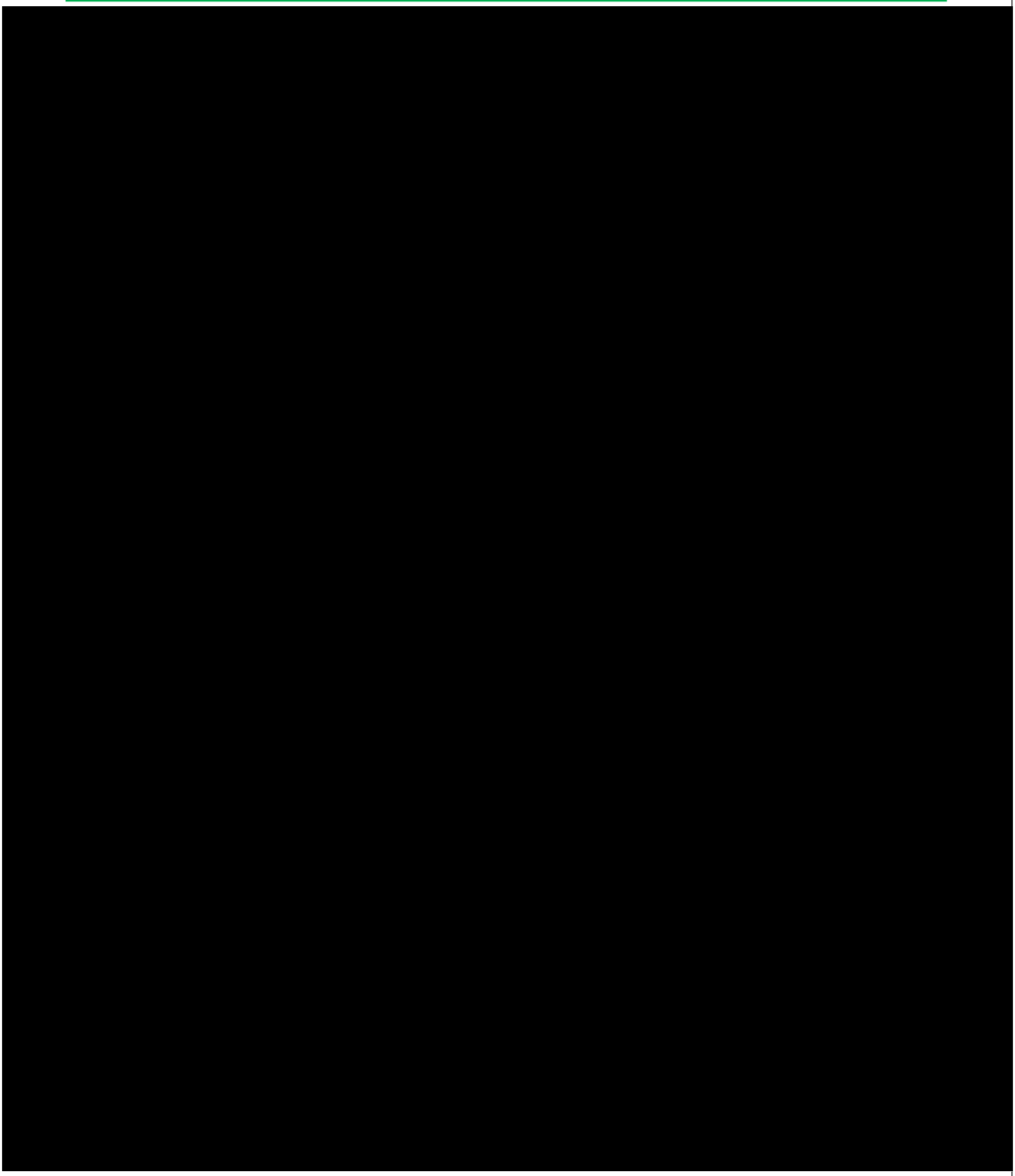
Description: Smart Switches

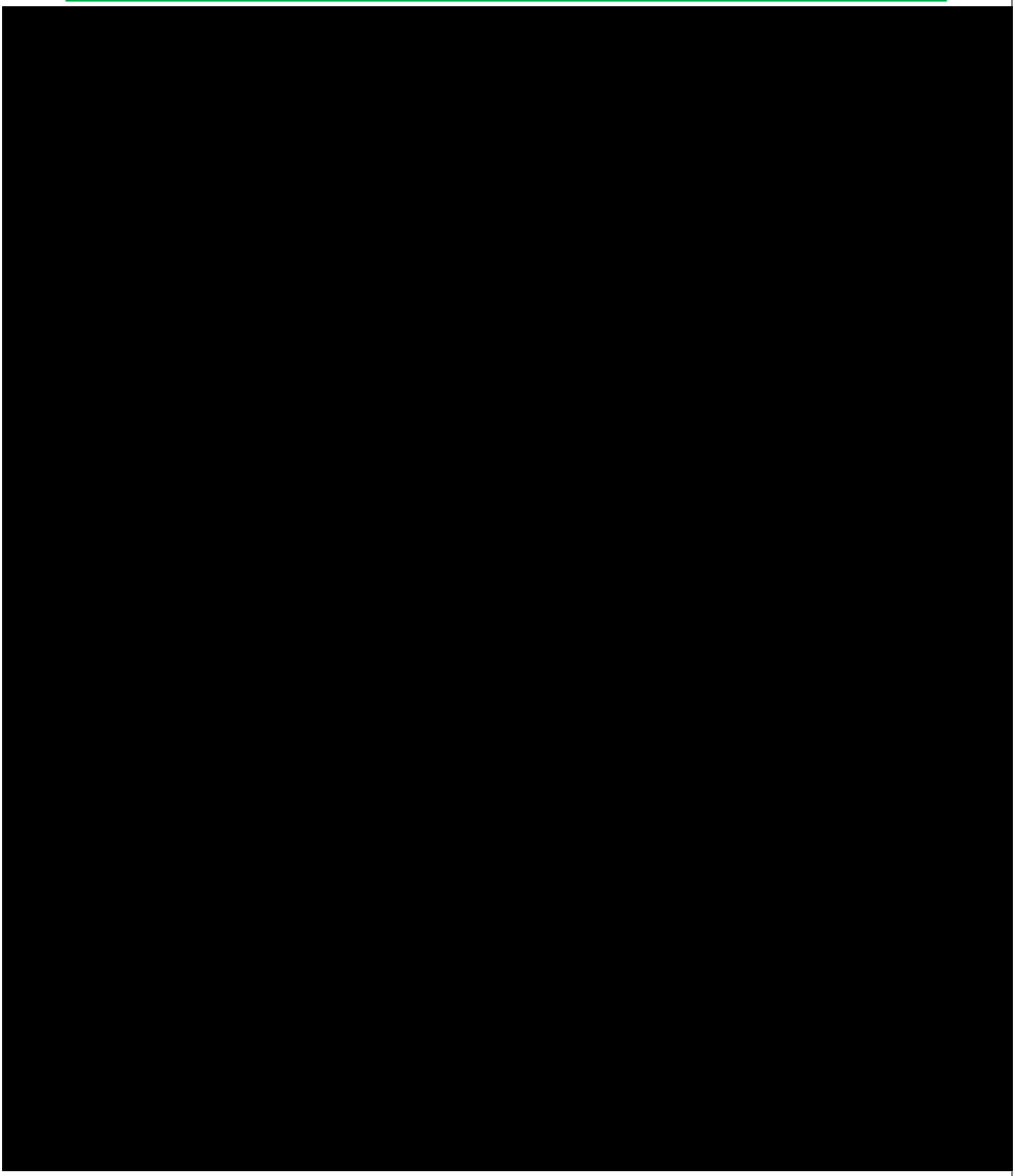
Item Description	CU	[redacted]	Amount
SWITCHING OH/DB/UG - SWITCHING NonNetwork - Average	16-ALL17		$3,509.60
TRAFFIC OH/DB/UG - Traffic Control - Police Officer	16-ALL18		$21,000.00
SECTIONALIZE OH - Recloser - 3ph	16-OH38		$335,927.20
SECTIONALIZE OH - Recloser Control - setting changes only	16-OH39A		$19,542.40
SECTIONALIZE OH-Vertical Disconnect Switches-600/900 amp 3-1ph 900 Amp In-line switches	16-OH43		$71,982.40
OTHER OTHER Remove GOAB, for a recloser installation	16-ALL14		$5,000.00

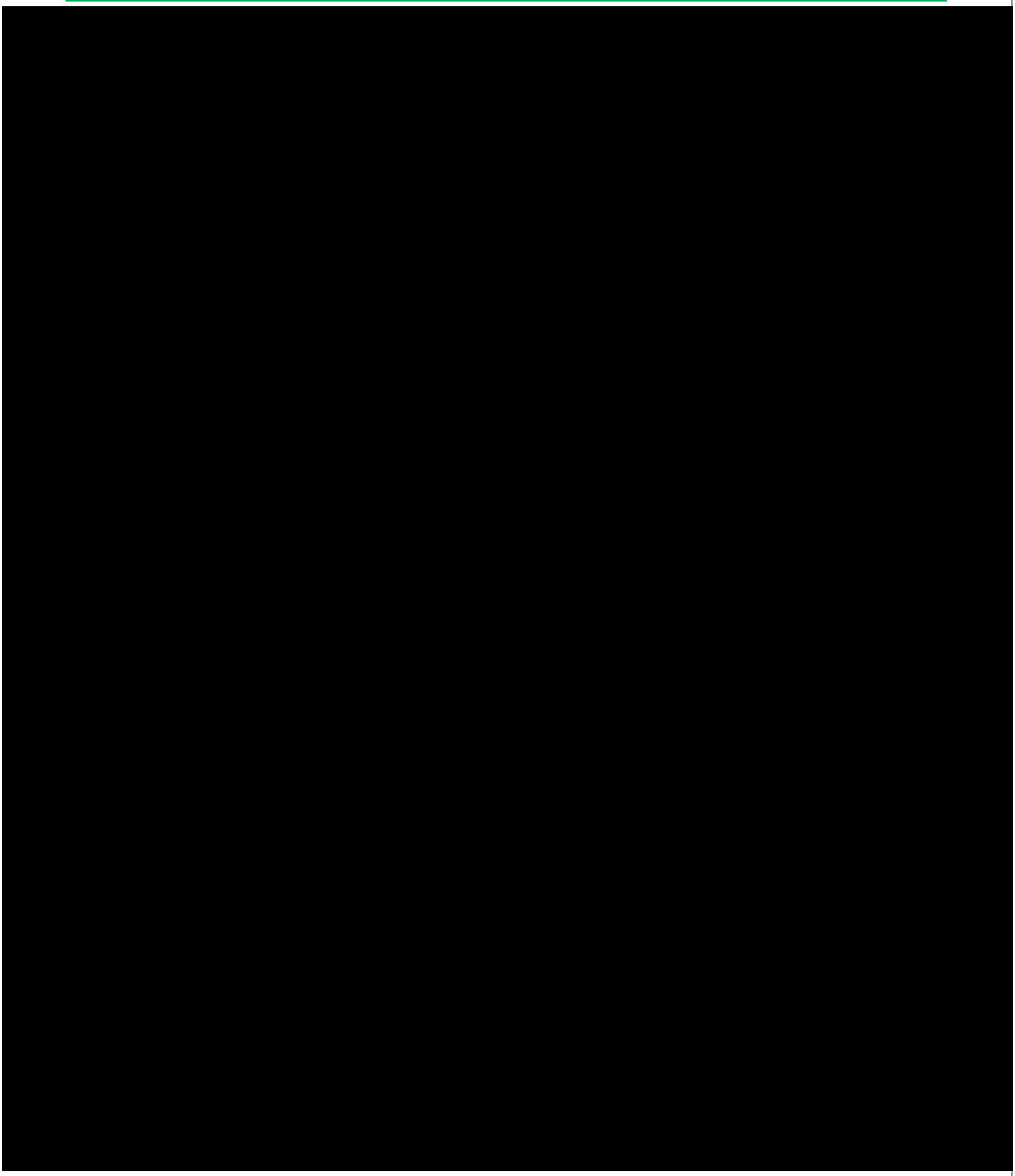












Attachment E: Partial Funding PAF

Operations Project Authorization Form

Project Title: [redacted]	**Project Number: CD01999**
Date Prepared: 08/19/2022	**Company:** Eversource CT
Organization: Electric Field Operations	**Class(es) of Plant:** D Line
Project Initiator: [redacted]	**Project Category:** SMART SWITCHES PROGRAM
Project Manager: [redacted]	**Project Type:** Specific
Project Sponsor: [redacted]	**Capital Investment part of original Operating Plan:** Yes
Estimated in service date: 12/31/2024	**Emergency Related Request?** No
Eng./Constr. Resources Budgeted? Yes	**Facility Type** (check all that apply): ☐ PTF ☐ non-PTF ☒ Distribution
Total Gross Capital Request: $570K	**Authorization Type:** Initial Funding

Executive Summary

[redacted]

[redacted]

Project Costs Summary

Note: Dollar values are in thousands

Capital Costs	2024	2025	2026+	Total
Internal Labor and Construction Equipment	$49	$0	$0	$49
Outside Services	$65	$0	$0	$65
Materials	$208	$0	$0	$208
Removals	$13	$0	$0	$13
Risk and Contingency	$2	$0	$0	$2
Other	$0	$0	$0	$0
Subtotal	**$339**	**$0**	**$0**	**$339**

Indirect Capital Costs	2024	2025	2026+	Total
Indirects/Overheads (including benefits)	$224	$0	$0	$224
Capitalized interest or AFUDC, if any	$7	$0	$0	$7
Subtotal	**$231**	**$0**	**$0**	**$231**
Total Capital Costs (Gross)	**$570**	**$0**	**$0**	**$570**
Less Total Customer Contribution	**$0**	**$0**	**$0**	**$0**
Project Costs (Net)	**$570**	**$0**	**$0**	**$570**

Technical Justification:

Project Need, Objective and Justification:

[redacted]

[redacted]

Project Objectives

[redacted]

Project Scope:

[redacted]

Major Material:

- Nova Reclosers - 7

Background:

[redacted] The zone is ranked 490 on the most recent Smart Switch ranking.

[redacted]

Alternatives Considered:

One alternative was to "do nothing" in the [redacted]

Regulatory Approvals:

Are Regulatory body approvals needed for the project?

No

Project Schedule

Milestone/Phase Name	Estimated Date
100% Engineering Completion	2/1/2024
Construction Start	9/1/2024
Testing/Commissioning	12/15/2024
In Service Date	12/31/2024

Risks and Risk Mitigation Plans

Risk Event	Risk Horizon	Likelihood of Occurrence	Risk Mitigation
Actual cost higher than estimated due to scope changes.	2024	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.	2024	Low	Plan internal resources to perform the work. Use competitive bidding to ensure lowest outside labor cost.
Materials Shortage or long lead times	2024	Medium	Pre-order long lead time material; minimize the use of non-standard and non-stocked material.
Storm delays	2024	Low	If storm activity delays work, we may be forced to use external resources.
System abnormal configuration	2024	Low	Schedule work to minimize system abnormal time. Install temporary bypasses/equipment if system will be abnormal for extended periods.

References

CD01999_project_needs_statement.pdf

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Appendices (One-Line Diagrams, Images, etc.)

CD01999 oneline 8-25-22.pdf

Circuit Map 08.30.2022.pdf