EVERSOURCE

Project Approval Form

Project Title: [redacted]	**Project Number: CD02078**
Date Prepared: 12/21/2023	**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: 12/31/24	
Total Capital Request: $320.5K	**Authorization Type:** Full Funding

1. Executive Summary

Project CD02078 was established to address [redacted]

- [redacted]
- [redacted]
- [redacted]
- [redacted]
- Project Location
  - Division: Central
  - District: Tolland AWC
  - City/Town: Mansfield, CT

The partial estimate for this project was $289K and was approved on 12/15/2022. The full funding estimate is $320.5K. The difference in cost equates to $31.5K, an increase of 11%. The difference in cost is due to increased material and labor cost and using legacy estimating units. If the project was estimated using the latest estimating units, the revised estimate would be $315.5K which is $5K less or a 2% increase.

2. Project Cost Summary

Note: Dollar values are in thousands.

Capital Costs	Year 2024	Year 2025+	Total
Direct Capital Costs			
Internal Labor and Construction Equipment	32.4	0.0	32.4
Outside Services	0.0	0.0	0.0
Materials	148.6	0.0	148.6
Removals	8.9	0.0	8.9
Risk and Contingency	22.4	0.0	22.4
Other	0.0	0.0	0.0
Subtotal – Direct Costs	**212.4**	**0.0**	**212.4**
Indirect Capital Costs			
Indirect/Overheads (including benefits)	108.2	0.0	108.2
Capitalized interest or AFUDC, if any	0.0	0.0	0.0
Subtotal – Indirect Costs	**108.2**	**0.0**	**108.2**
Total Gross Capital Costs	**320.5**	**0.0**	**320.5**
Customer Contribution	**0.0**	**0.0**	**0.0**
Total Net Capital Project Costs	**320.5**	**0.0**	**320.5**

3. Technical Justification

Background, Project Need/Justification, and Project Scope

a. Background

Outage history:

[redacted]

b. Project Need

[redacted]

c. Project Scope

The scope of this project is as follows:

- [redacted]

Major Material:

- 3 Reclosers
- 5 Disconnect Switch

4. Alternatives Considered

Preferred Option: [redacted]

Option 2: [redacted]

Design Criteria	Option
	[redacted]

[redacted]

Estimate Type:	Full	Partial
Capital Cost	$320.5K	$133.2K
Expense Cost	$9.3K	$5.8K
Total Cost	$329.8K	$139K
Preferred option	X	

Note – All estimates were calculated due to updated estimating units.

5. Project Schedule

Milestone/Phase Name	Estimated Date
Partial Approval	December 2022
100% Detailed Engineering Completion	March 2023
Construction Start	March 2024
In Service Date	December 2024

6. 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 Summary Sheet	*YES*
F. Partial Funding PAF	*YES*

Attachment A: Cost Estimate:

Budget Summary - Preferred Option Option 2

2024

ID	Title	Status	Rev #	Contingency	Expenditure Amount	Net Estimate
1	[redacted] Install 1 New TR with Setting	Draft	0	28%	$121,272	$121,272
2	[redacted] Install SS on Clover Mill Rd.	Draft	0	28%	$80,361	$80,361
3	[redacted] Install a SS	Draft	0	28%	$75,869	$75,869
4	Settings changes on 71S and 4000	Draft	0	28%	$19,559	$19,559
				2024 Total:	**$297,062**	**$297,062**
				Total Project:	**$297,062**	**$297,062**

Estimate

Preliminary Estimate Summary

Revision Number:	0
Contingency:	28.00%
SubTotal:	$94,744
Contingency Amount:	$26,528
Estimate:	$121,272
Reimbursement:	$0
Net Amount:	**$121,272**

Description:

Item Description	CU	Amount
SWITCHING OH/DB/UG - SWITCHING NonNetwork - Average	16-ALL17	$7,019.20
TRAFFIC OH/DB/UG - Traffic Control - Flagger	16-ALL19	$2,000.00
SECTIONALIZE OH - Recloser Control - setting changes only Change the settings on the [redacted] to become an MR	16-OH39A	$4,885.60
SECTIONALIZE OH-Vertical Disconnect Switches-600/900 amp 3-1ph Install vertical disconnect switches on pole 1812 to replace solid on W[redacted]ole 1719 on Gurleyville Rd. with vertical disconnects. Install a disconnect on pole 3	16-OH43	$30,849.60
OTHER OTHER Labor to relocate the two regulators on Gurleyville Rd to poles 1752 ar	16-ALL14	$2,000.00
SECTIONALIZE OH - Recloser - 3ph New two-way tie recloser on pole 1746 located on Gurleyville Rd.	16-OH38	$47,989.60

Estimate

	Preliminary Estimate Summary
Revision Number:	0
Contingency:	28.00%
SubTotal:	$62,782
Contingency Amount:	$17,579
Estimate:	$80,361
Reimbursement:	$0
Net Amount:	**$80,361**

Description:

Item Description	CU	Amount
SWITCHING OH/DB/UG - SWITCHING NonNetwork - Average	16-ALL17	$3,509.60
TRAFFIC OH/DB/UG - Traffic Control - Flagger	16-ALL19	$1,000.00
SECTIONALIZE OH - Recloser - 3ph Install a smart switch on pole 172 on Clover Mill Rd.	16-OH38	$47,989.60
SECTIONALIZE OH-Vertical Disconnect Switches-600/900 amp 3-1ph Install vertical disconnect switch with new smart switch on pole 172.	16-OH43	$10,283.20

[redacted]

Estimate

	Preliminary Estimate Summary
Revision Number:	0
Contingency:	28.00%
SubTotal:	$59,273
Contingency Amount:	$16,596
Estimate:	$75,869
Reimbursement:	$0
Net Amount:	**$75,869**

Description:

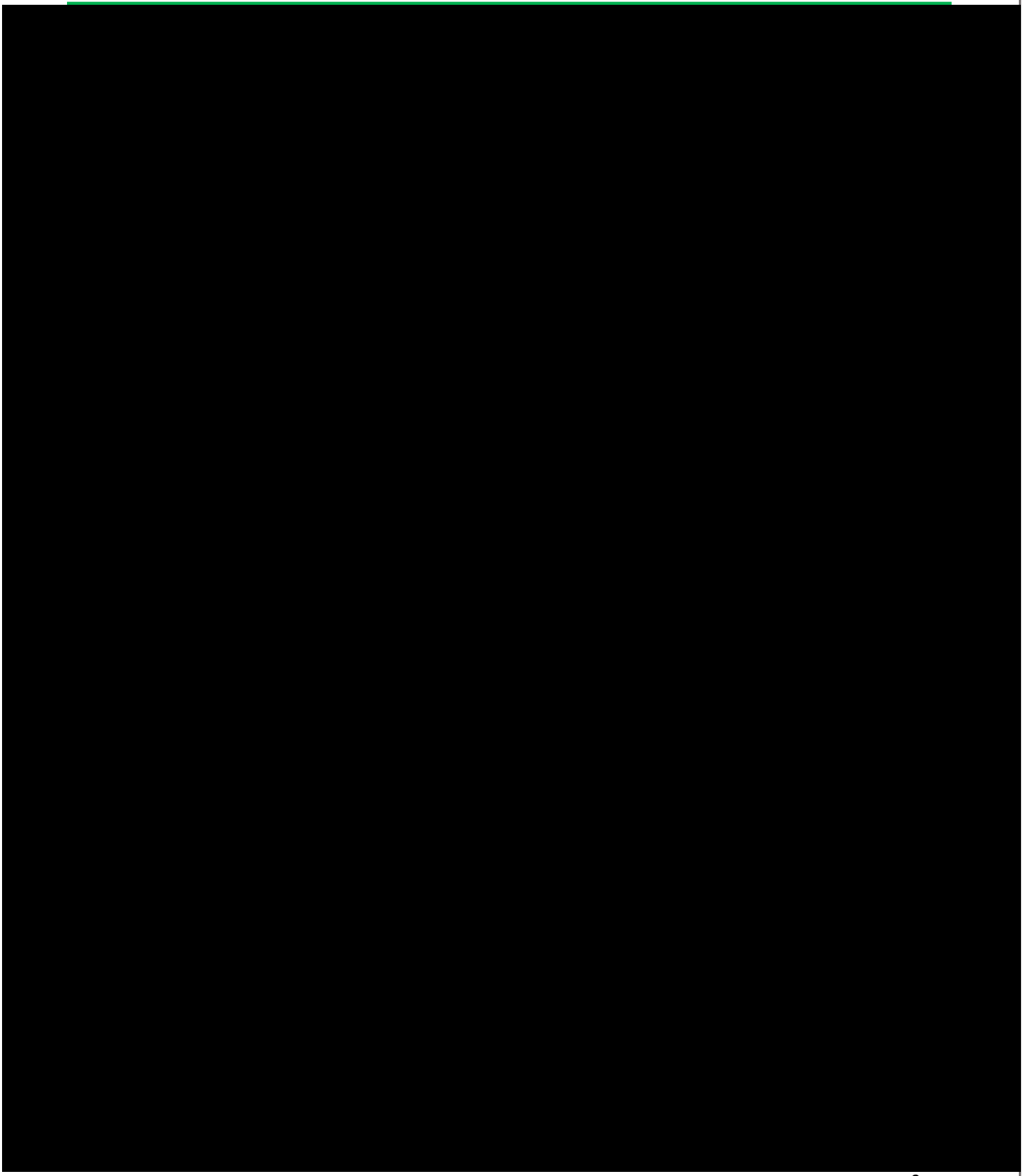
Item Description	CU	Amount
TRAFFIC OH/DB/UG - Traffic Control - Police Officer	16-ALL18	$1,000.00
SECTIONALIZE OH - Recloser - 3ph Install a SS on pole 269 on Storrs. Rd.	16-OH38	$47,989.60
SECTIONALIZE OH-Vertical Disconnect Switches-600/900 amp 3-1ph Install vertical disonnect with SS on pole 269 on Storrs Rd.	16-OH43	$10,283.20

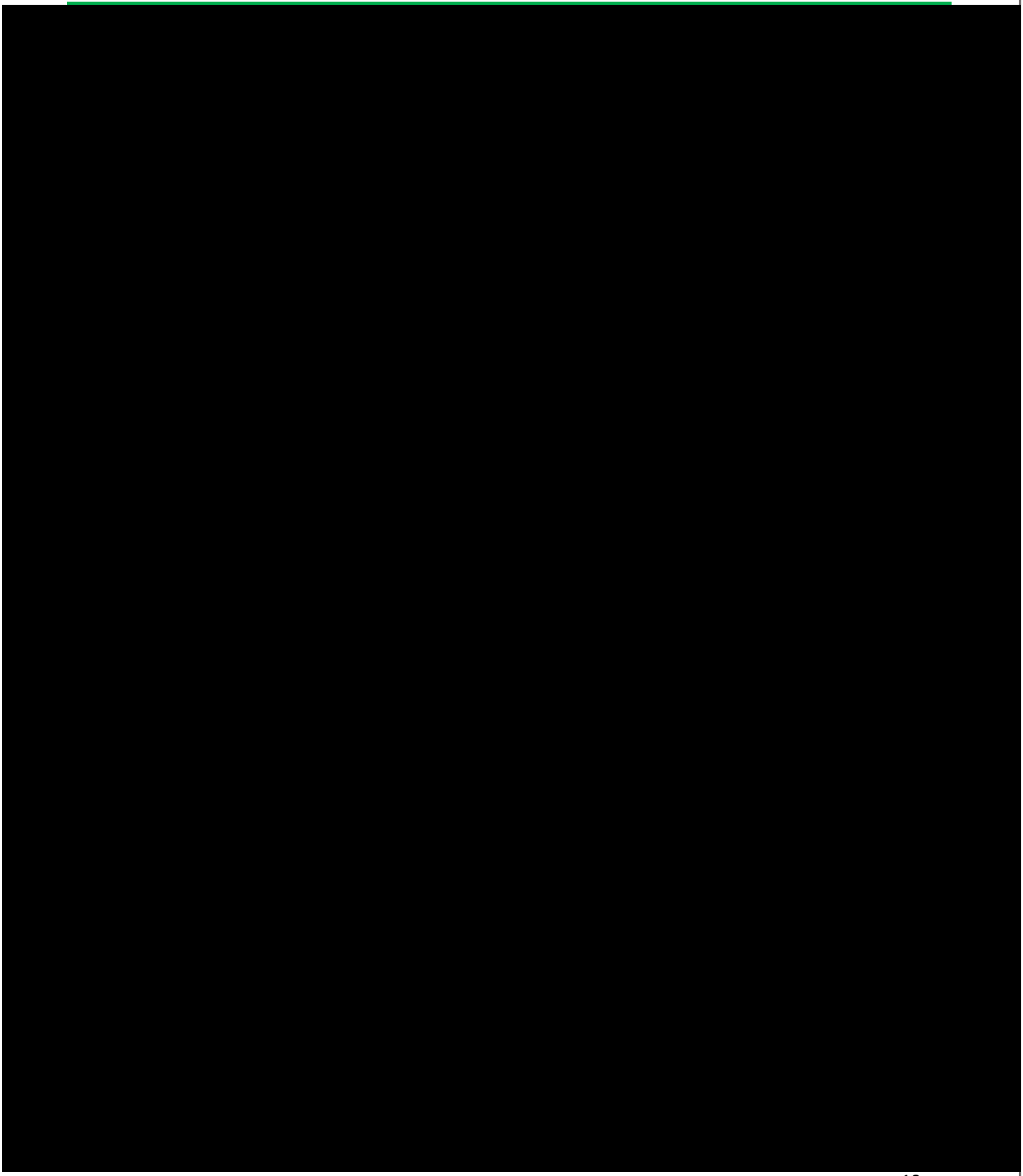
[redacted]

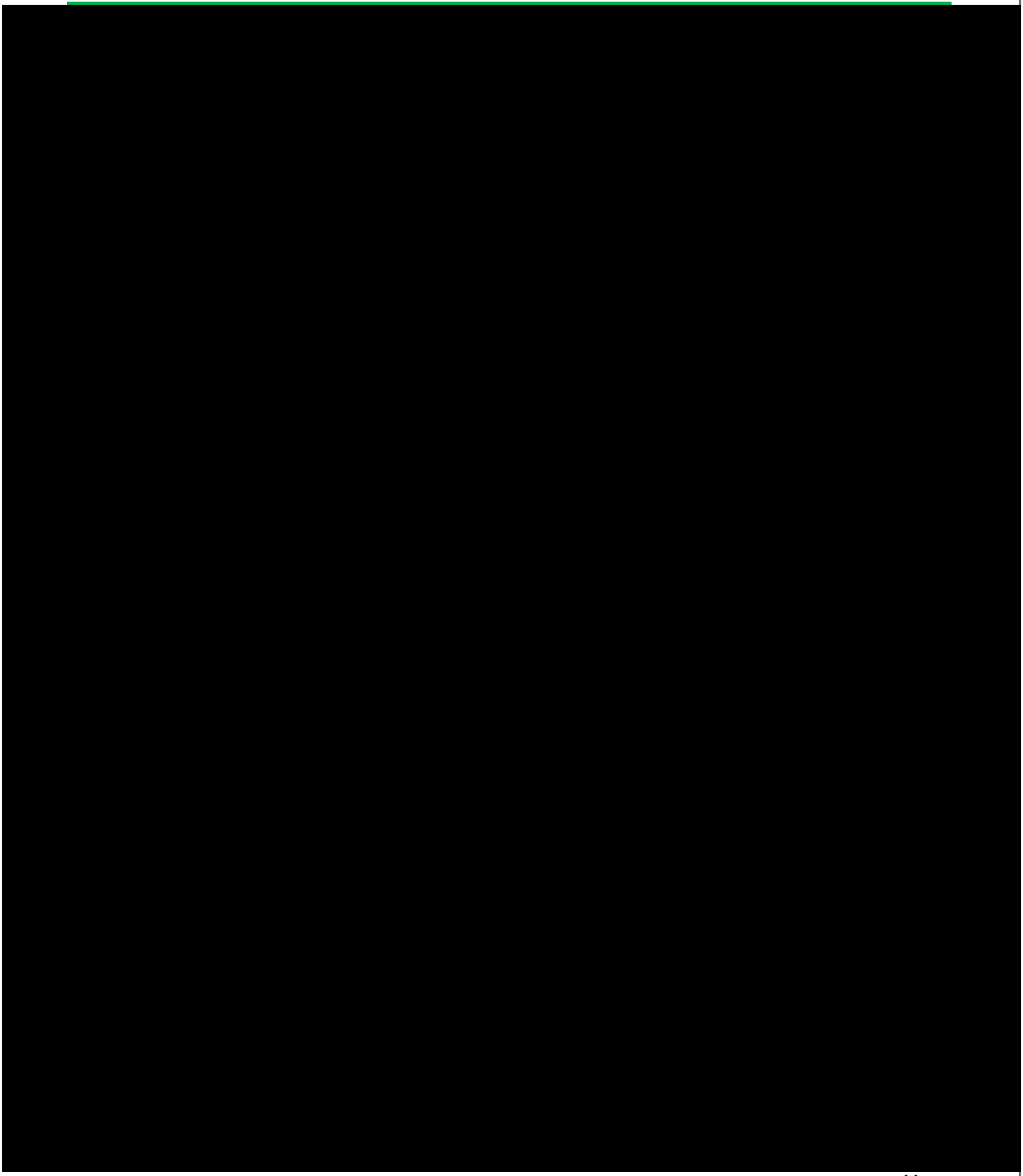
Estimate

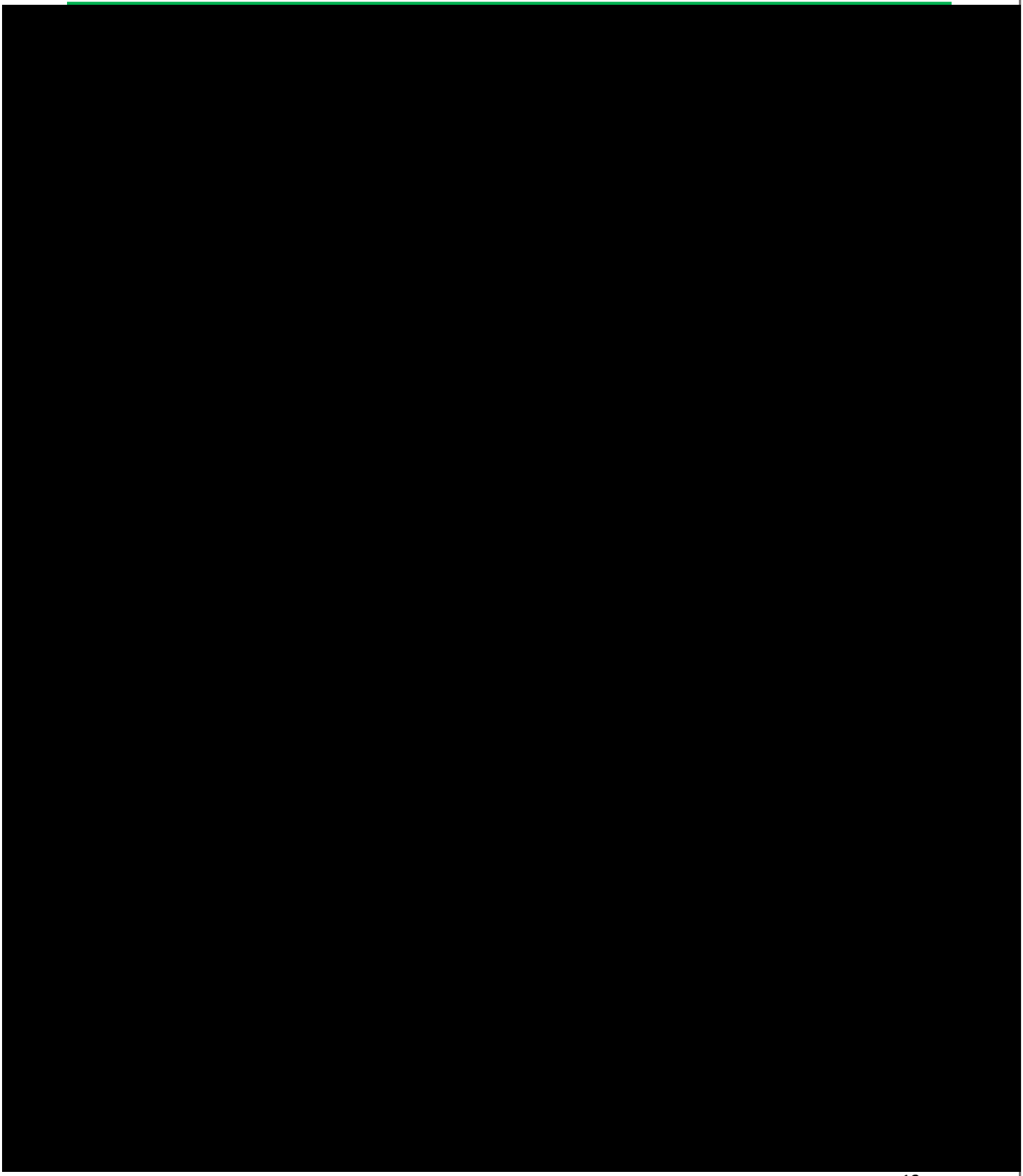
	Preliminary Estimate Summary
Revision Number:	0
Contingency:	28.00%
SubTotal:	$15,281
Contingency Amount:	$4,279
Estimate:	$19,559
Reimbursement:	$0
Net Amount:	**$19,559**
Description:	

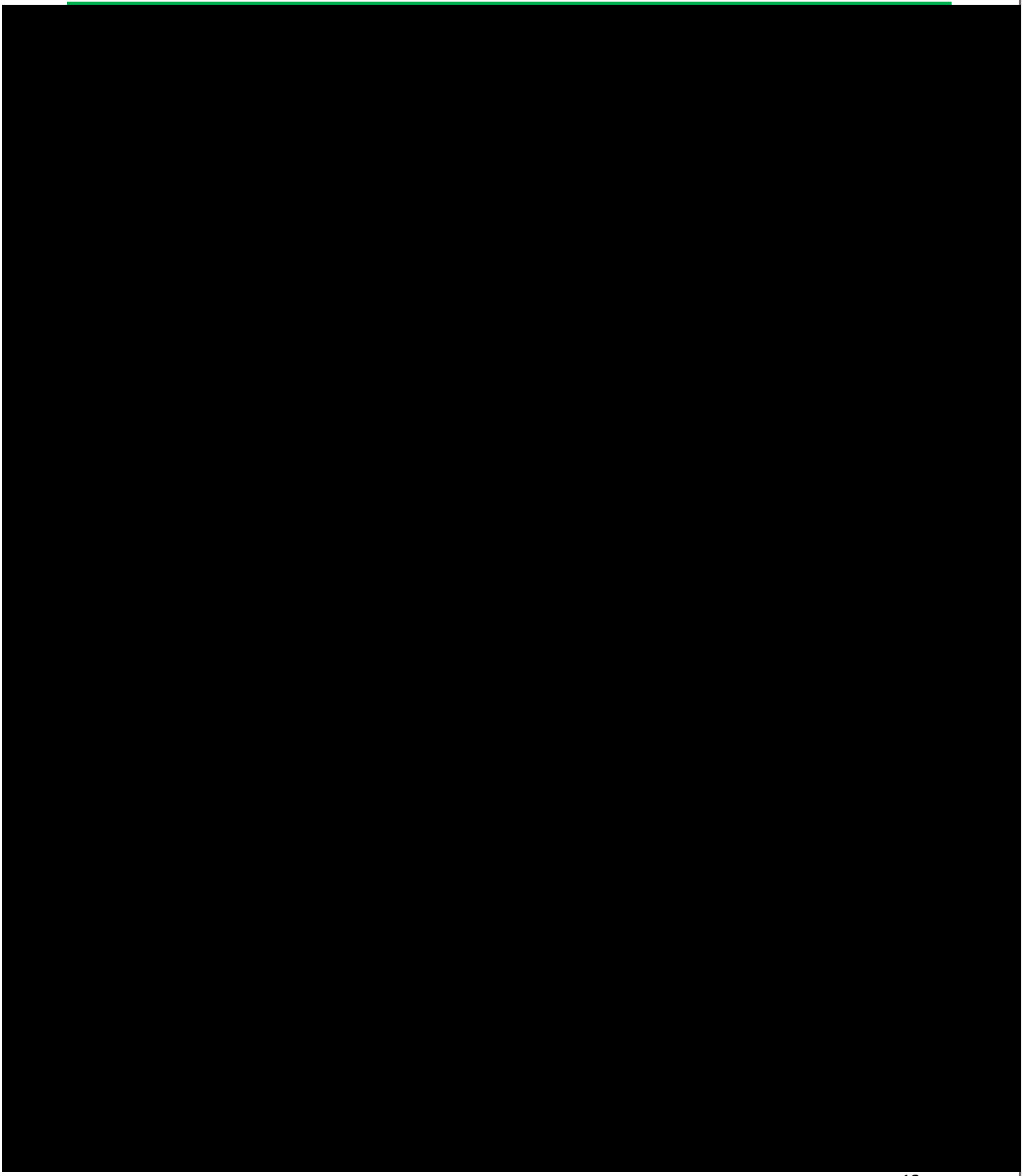
Item Description	CU	[redacted]	Amount
SWITCHING OH/DB/UG - SWITCHING NonNetwork - Average	16-ALL17		$3,509.60
TRAFFIC OH/DB/UG - Traffic Control - Police Officer	16-ALL18		$2,000.00
SECTIONALIZE OH - Recloser Control - setting changes only Change settings on the [redacted]	16-OH39A		$9,771.20

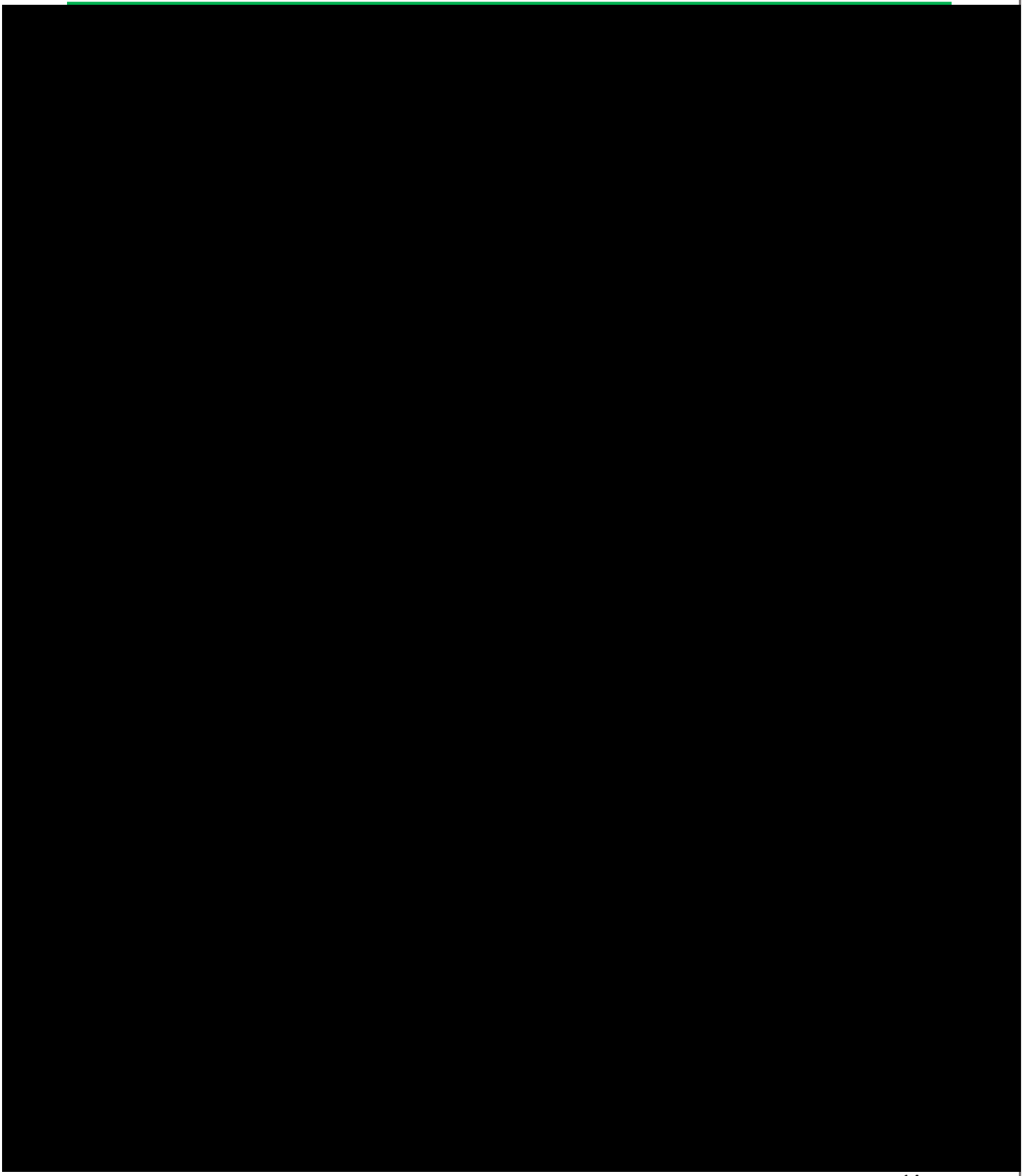


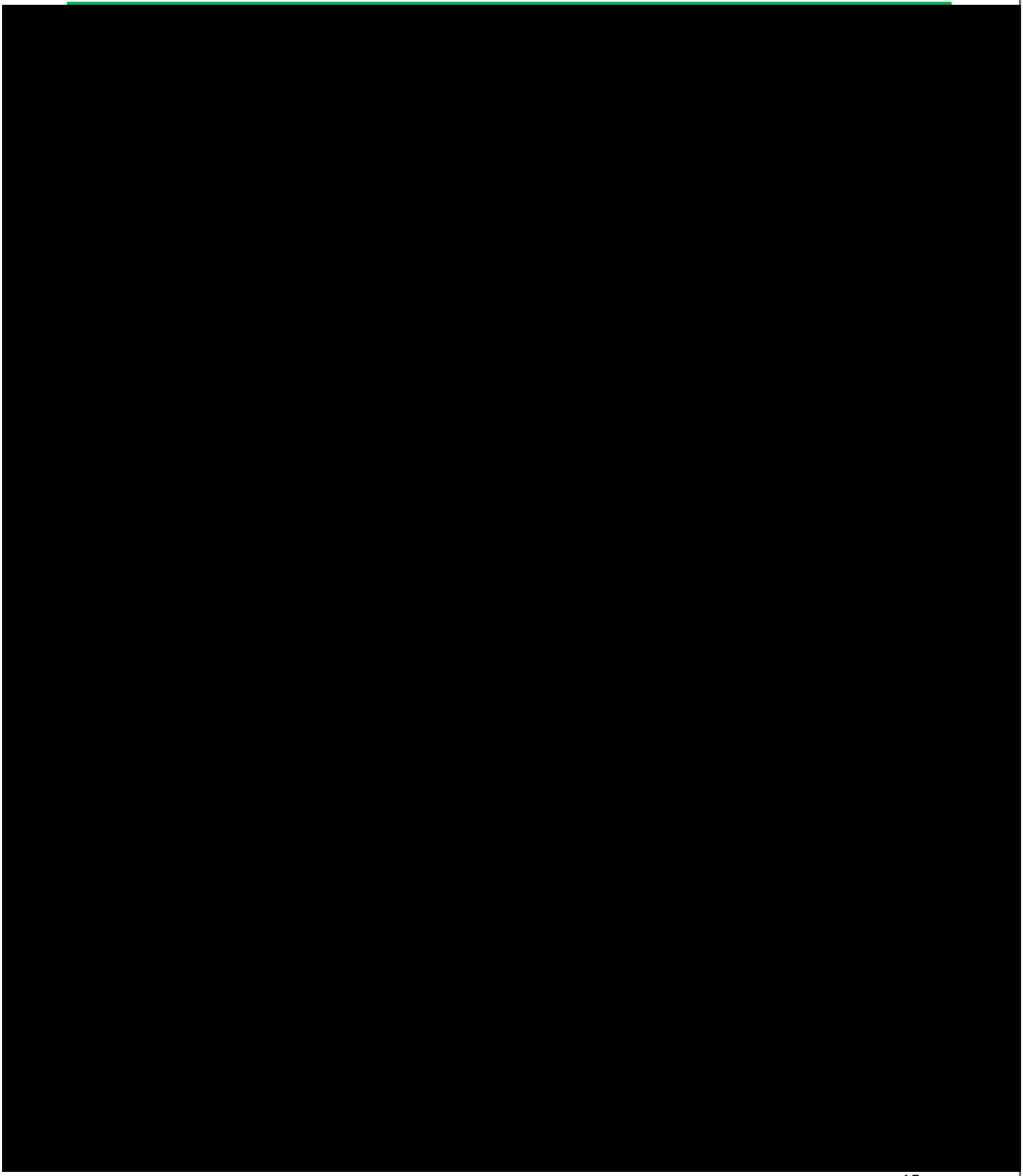












Operations Project Authorization Form

Project Title: [redacted]	**Project Number: CD02078**
Date Prepared: 10/27/2022	**Company:** Eversource CT
Organization: EFO	**Class(es) of Plant:** D Line
Project Initiator: [redacted]	**Project Category: Smart Switch**
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?** Yes
Eng./Constr. Resources Budgeted? Yes	**Facility Type** (check all that apply): ☐ PTF ☐ non-PTF ☑ Distribution
Total Gross Capital Request: $289K	**Authorization Type:** Initial Funding

Executive Summary

[redacted]

Project Costs Summary

Capital Costs	2022	2023	2024+	Total
Direct Capital Costs				
Internal Labor and Construction Equipment	$0	$25	$0	$25
Outside Services	$0	$33	$0	$33
Materials	$0	$106	$0	$106
Removals	$0	$7	$0	$7
Risk and Contingency	$0	$1	$0	$1
Other	$0	$0	$0	$0
Subtotal	**$0**	**$172**	**$0**	**$172**
Indirect Capital Costs				
Indirect/Overheads (including benefits)	$0	$114	$0	$114
Capitalized interest or AFUDC, if any	$0	$4	$0	$4
Subtotal	**$0**	**$117**	**$0**	**$117**
Total Customer Contribution	$0	$0	$0	$0
Total Capital Project Costs	**$0**	**$289**	**$0**	**$289**

Technical Justification:

Project Need, Objective and Justification

[redacted]

The goal of the Smart Switch program is to reduce the number of customers exposed to an outage event. This project reduces two large customer zones by adding sectionalizing reclosers to isolate outages.

Project Scope

[redacted]

Major Material:

- 3 Reclosers
- 4 sets of Disconnect Switches

Background

Outage History

[redacted]

Alternatives Considered:

Alternatives were considered (please describe below)

The other option was to not install the smart switch as that zone has experienced only two outages and that zone wasn't the primary focus of this project.

Regulatory Approvals:

No

Project Schedule

Milestone/Phase Name	Estimated Date
100% Engineering Completion	October 2022
Construction Start	April 2024
Testing/Commissioning	September 2024
In Service Date	December 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	Medium	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	2024	Low	Design to minimize customer impact. Project Preplanning and customer/community outreach
Internal construction resources not available to perform the work.	2023	High	Plan internal resources to perform the work. Use competitive bidding to ensure lowest outside labor cost.
Internal engineering resources not	2023	Medium	Plan internal resources to perform the work. Use competitive bidding to ensure lowest outside labor cost.

available to perform the work.			
Storm delays	2024	Medium	If storm activity delays work, we may be forced to use external resources.