EVERSOURCE

Project Approval Form

Project Title: [redacted]	**Project Number: CD01971**
Date Prepared: 12/14/2023	**Company:** Eversource CT
Organization: Electric System Operations	**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	Towns: 11F9, Andover, Coventry
Total Capital Request: $763.3K	**Authorization Type:** Full Funding

1. Executive Summary

[redacted]

[redacted]

The initial engineering estimate for project CD01971 was approved for $722K on July 28, 2022; however, the initial estimate did not include a revised per unit cost for labor and material. Therefore, the full funding request for this project is $763.3.

2. Project Cost Summary

Note: Dollar values are in thousands.

Capital Costs	2024	Year 2	Year 3+	Total
Internal Labor and Construction Equipment	45.3	0.0	0.0	45.3
Outside Services	134.5	0.0	0.0	134.5
Materials	239.3	0.0	0.0	239.3
Removals	20.7	0.0	0.0	20.7
Risk and Contingency	53.3	0.0	0.0	53.3
Other	0.0	0.0	0.0	0.0
Subtotal	**493.0**	**0.0**	**0.0**	**493.0**

Indirect Capital Costs	2024	Year 2	Year 3+	Total
Indirects/Overheads (including benefits)	270.3	0.0	0.0	270.3
Capitalized interest or AFUDC, if any	0.0	0.0	0.0	0.0
Subtotal	**270.3**	**0.0**	**0.0**	**270.3**

Total Capital Costs (Gross)	**763.3**	**0.0**	**0.0**	**763.3**
Less Total Customer Contribution	**0.0**	**0.0**	**0.0**	**0.0**
Project Costs (Net of Reimbursement)	**763.3**	**0.0**	**0.0**	**763.3**

3. Technical Justification

a. Background

[redacted].

b. Project Need

[redacted]

a. Project Scope

The project will fund the following work:

[redacted] **Cost:**
$127,069

[redacted]

- **Total $/CMS:** $0.12
- **Total $/CIS:** N/A

a. [redacted]

2. [redacted] **Cost:** $188,309

([redacted]

[redacted] $88,462

[redacted] $99,847

- **Total $/CMS:** $0.16
- **Total $/CIS:** $860.8

[redacted]

3. [redacted] **Cost:** $120,290

- **Total $/CMS:** $3.15
- **Total $/CIS:** $1,948

[redacted]

Major Material:

2024

[redacted]

2. Alternatives Considered

1 – Do Nothing (0.00) –

This alternative was not selected because it does not increase the number of customers automatically restored through automation during extreme weather events , nor reduces customer's zones size taking into account areas where outages have occurred in zones of 500 customers or more.

3. Project Schedule

Add any additional milestones that are pertinent to the project

Milestone/Phase Name	Estimated Date
Preliminary Approval	July 2022
Full Funding	May 2023
Start Planning	January 2024
Protection Study/Settings	February 2024
Start Construction	April 2024
End Construction	June 2024

4. Regulatory Decisions

5. Codes and Standards

6. Risk and Contingencies

7. 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.
Internal engineering 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.
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	Medium	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	Low	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.
Wetlands / Environmentally sensitive area	2024	Low	Use of mats and specialty equipment, only work during certain times of the year.

8. References

References
DSEM 02.501 – Storm Resiliency Guideline
DSEM 02.201 – Backbone Rehabilitation
DSEM 11.551 – Automatic Switchgear Selection Guide
DSEM 07.223 – UG/DB Design Selections, and DSEM 05.831 – Underground System Nomenclature

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

Attachment	Included in Submittal?
A. Cost Estimate	*YES*
B. Geographical View	*YES*
C. One Line	*YES*
	YES

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

Need Statement ***Detail Maps*** ***One-Lines*** ***Load Sheets***


CD01971_project_needs_statement_r0.3






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9%202021%20TDRP_

Analysis/Outage Events


[redacted]018-2021_Outage%20Events_r0.2.

A. Cost Estimate

Connecticut Light & Power
A Northeast Utilities Company

Specific Project Proposal - Project #: CD01971

[redacted]

Work Classification

Category: Line
Type: SRSS
Type Desc: SMART SWITCHES PROGRAM
Work Type:

Ownership / Management

AWC: Tolland
Statewide: No
Owner: [redacted]
Manager:

Project Information

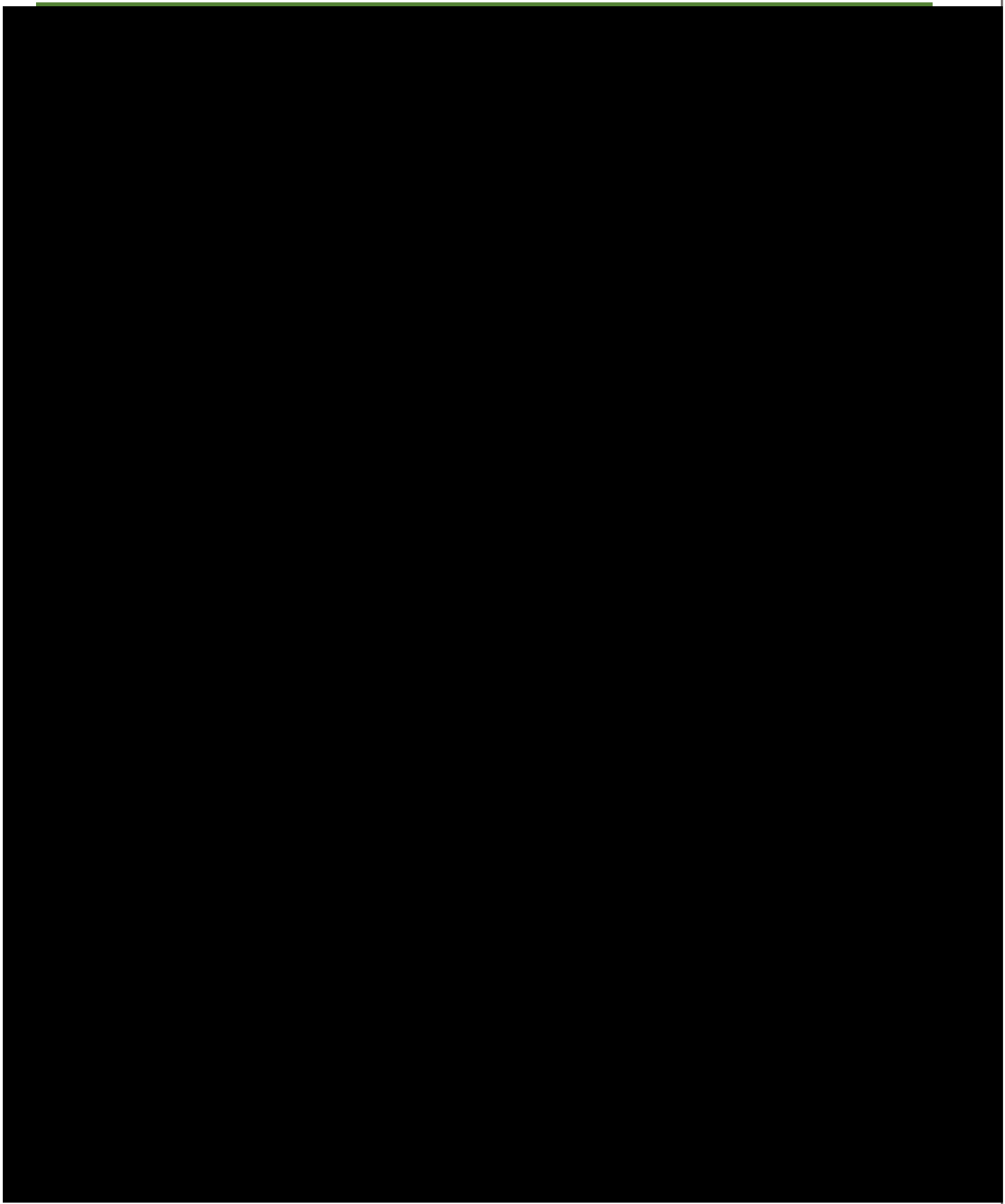
Status: Draft
SPS #:
AIS Score:
Associated Projects:
Assignment ID:
Patrol Find ID:

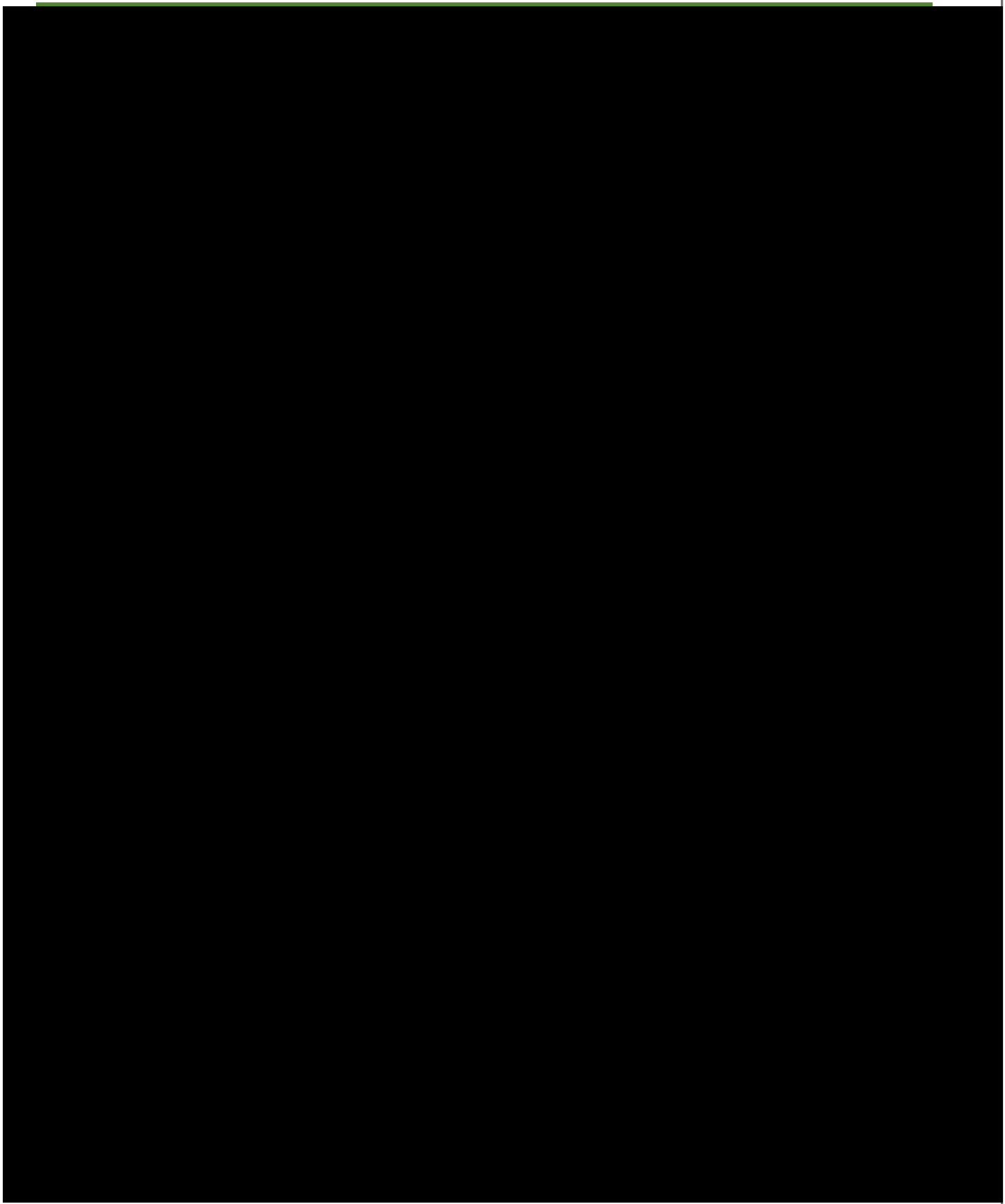
Budget Summary - Preferred Option

Preferred Option_Seg #11_Contingency Ovrld

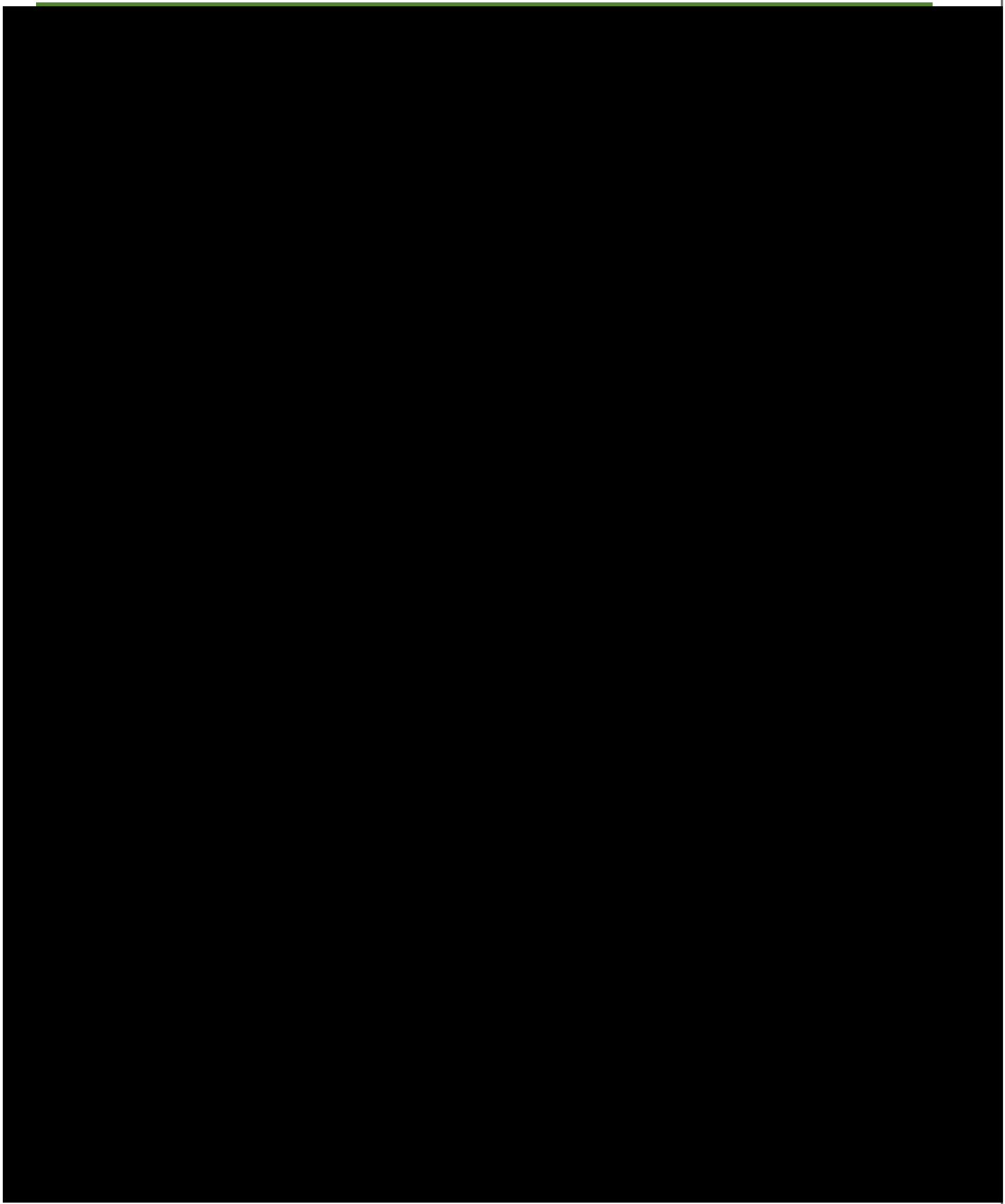
2024

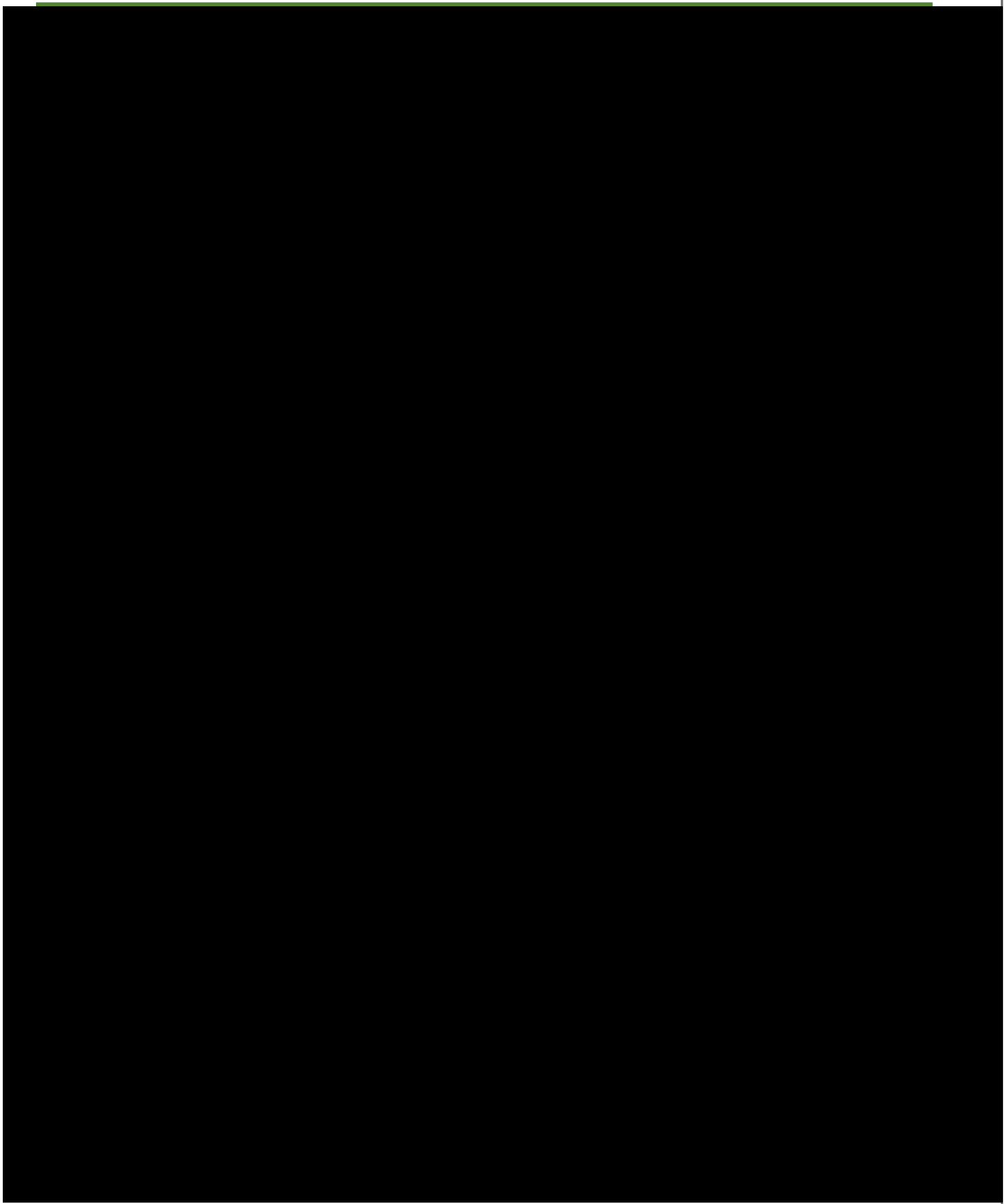
ID	Title	Status	Rev #	Contingency	Expenditure Amount	Net Estimate
1	Columbia_Jonathan Trumbull Hwy__Smart Sw	Draft	0	28%	$88,462	$88,462
2	Columbia_Jonathan Trumbull Hwy__Recon_P6	Draft	0	28%	$99,847	$99,847
11	Andover_Jonathan Trumbull Hwy_Recloser_P	Draft	0	28%	$127,069	$127,069
29	Coventry_South St_Split Lg Cust Zone_P 4	Draft	0	28%	$120,290	$120,290
30	Coventry_Main St_Split Lg Cust Zone	Draft	0	28%	$215,092	$215,092
31	Willimantic_Valley St_P 156_Split Large	Draft	0	28%	$88,462	$88,462
				2024 Total:	**$739,222**	**$739,222**
				Total Project:	**$739,222**	**$739,222**

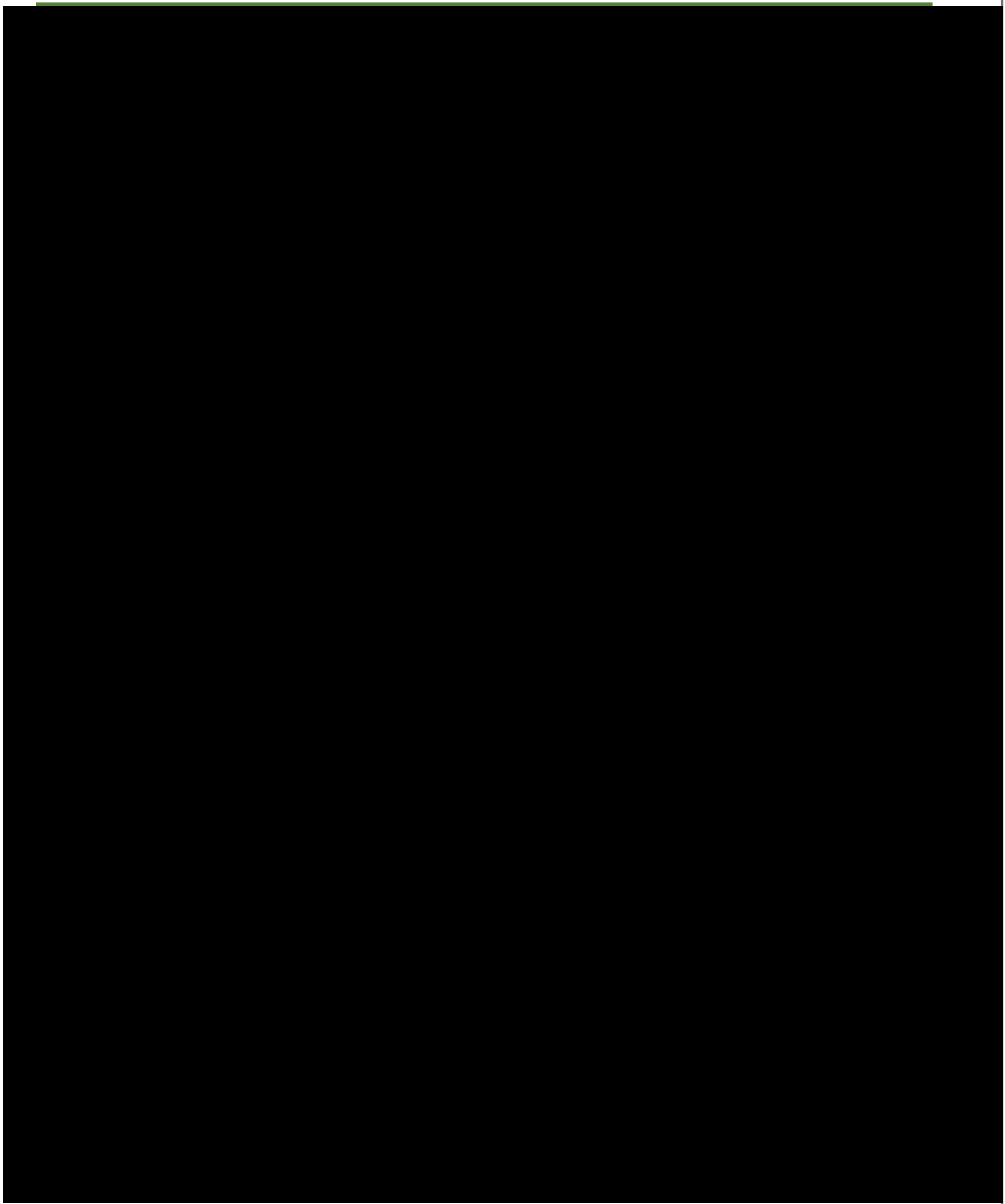




[redacted]







Operations Project Authorization Form

Project Title: [redacted]	**Project Number:** CD01971
Date Prepared: 07/28/2022	**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 X Distribution
Total Gross Capital Request: $720K	**Authorization Type:** Initial Funding

Executive Summary

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

Project Costs Summary

Note: Dollar values are in thousands

Capital Costs	2024	Year 2	Year 3+	Total
Internal Labor and Construction Equipment	$63	$0	$0	$63
Outside Services	$82	$0	$0	$82
Materials	$263	$0	$0	$263
Removals	$17	$0	$0	$17
Risk and Contingency	$2	$0	$0	$2
Other	$0	$0	$0	$0
Subtotal	**$428**	**$0**	**$0**	**$428**
Indirect Capital Costs	**2024**	**Year 2**	**Year 3+**	**Total**
Indirects/Overheads (including benefits)	$283	$0	$0	$283
Capitalized interest or AFUDC, if any	$9	$0	$0	$9
Subtotal	**$292**	**$0**	**$0**	**$292**
Total Capital Costs (Gross)	**$720**	**$0**	**$0**	**$720**

Technical Justification:

Project Need, Objective and Justification

[redacted] The zones in the past four years have experienced the following number of outages:

[redacted]

Technical Justification

Project Scope

The project will fund the following work:

3. [redacted] **Cost:** $127,069
[redacted]

- **Total $/CMS:** $0.12
- **Total $/CIS:** N/A

c. [redacted]

4. [redacted] **Cost:** $188,309
[redacted]

Segment #1 – Install Smart Switch $88,462
Segment #2 – Reconductor $99,847

- **Total $/CMS:** $0.16
- **Total $/CIS:** $860.8

[redacted]

4. [redacted] **Cost:** $120,290

- **Total $/CMS:** $3.15
- **Total $/CIS:** $1,948

b. [redacted]

Technical Justification (Cont'd)

Project Scope

5. [redacted] **Cost:** $215,092

- **Total $/CMS:** $6.10
- **Total $/CIS:** $978.8

[redacted]

6. [redacted] **Cost:** $88,462

- **Total $/CMS:** $6.51
- **Total $/CIS:** $401.2

a. [redacted]

*Reliability metric calculations are shown in the Analysis/Load Events spreadsheet

Background

[redacted]

[redacted]

Alternatives Considered:

Alternatives were considered (please describe below)

Option 1: Do nothing and risk having an outage to a large customer zone.

Regulatory Approvals:

No

Project Schedule

Milestone/Phase Name	Estimated Date
Preliminary Approval	July 2022
Full Funding	May 2023
Start Planning	January 2024
Protection Study/Settings	February 2024
Start Construction	April 2024
End Construction	June 2024

Risks and Risk Mitigation Plans

Risk Event	Risk Horizon	Likelihood of Occurrence	Risk Mitigation
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References

DSEM 02.501 – Storm Resiliency Guideline

DSEM 02.201 – Backbone Rehabilitation

DSEM 03.301 – Reliability Project Cost Effectiveness

DSEM 10.421 – Smart Switches

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

Need Statement ***Detail Maps*** ***One-Lines*** ***Load Sheets***

CD01971_project_needs_statement_r0.3

CD01971_[redacted]SS_CD01971_r0.3.pdf

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Analysis/Outage Events

[redacted]_2018-2021_Outage%20Events_r0.2.