EVERSOURCE

Project Approval Form

Project Title: [redacted] Cable Replacement	**Project Number:** CD01780
Date Prepared: 11/27/2023	**Company:** Eversource CT
Organization: Distribution Engineering	**Project Category:** RELIABILITY IMPROVE SPEC PROJ
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: $235.3K	**Authorization Type:** Full Funding

1. Executive Summary

This project proposes [redacted]

Project location: Division Central, Cheshire AWC, Meriden

This is for full funding:

Full estimate/Partial estimate = $235K/$217K

Full is 108.3% of the partial estimate.

Legacy units were used in the calculation of the initial estimate. Had revised estimating units been used the partial estimate would have been 30% higher or $282K.

2. Project Cost Summary

Capital Costs	2023	2024	2025+	Total
Internal Labor and Construction Equipment	61.8	0.0	0.0	61.8
Outside Services	1.3	0.0	0.0	1.3
Materials	51.2	0.0	0.0	51.2
Removals	5.4	0.0	0.0	5.4
Risk and Contingency	4.6	0.0	0.0	4.6
Other	4.7	0.0	0.0	4.7
Subtotal	**129.0**	**0.0**	**0.0**	**129.0**

Indirect Capital Costs				Total
Indirects/Overheads (including benefits)	105.5	0.0	0.0	105.5
Capitalized interest or AFUDC, if any	0.8	0.0	0.0	0.8
Subtotal	**106.3**	**0.0**	**0.0**	**106.3**

Total Capital Costs (Gross)	**235.3**	**0.0**	**0.0**	**235.3**

Less Total Customer Contribution	**0.0**	**0.0**	**0.0**	**0.0**

Project Costs (Net of Reimbursement)	**235.3**	**0.0**	**0.0**	**235.3**

Explain unique payment provisions, if applicable:

3. Technical Justification

a. Background

[redacted]. There has been only 1 outage on this device in the past 5 years. [redacted].

[redacted]

b. Project Need

[redacted]

[redacted]

c. Project Scope



Major Material:

- 940’ of 3 phase 556 AAC Spacer Cable
- 8 Poles
- 3 1-phase transformers
- 1 Transformer Bank

4. Alternatives Considered

Project Option Comparison

Design Criteria	Option [redacted]		
Authorization Type	Full	Full	
Capital Cost	$235.3K	$195.8K	
Expense Cost	$13.3K	$11.1K	
Total Cost	$248.7K	$206.9K	
Total Cost / CM Saved	$47.37	$44.97	
Total Cost / CI Saved	$3,458	$3,283	
Preferred option	X		

Option 1 was selected to provide the additional capacity from 556 versus 336 conductors.

5. Project Schedule

Add any additional milestones that are pertinent to the project

Milestone/Phase Name	Estimated Date
Partial Approval	August 2021
100% Detailed Engineering Completion	July 2022
Fully Funded	December 2023
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.
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.	2023	Low	Plan internal resources to perform the work. Use competitive bidding to ensure lowest outside labor cost.
Materials Shortage or long lead times	2023	Medium	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.

Technological risks involving integration of new technology	2023	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	2023	Low	Use of mats and specialty equipment, only work during certain times of the year.

9. References

References
1.
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. Photo of ringed cable	*NO*
F.	

A. Cost Estimate

EVERSOURCE

Project Approval Form

Work Classification

Category: Line

Type: REL1

Type Desc: RELIABILITY IMPROVE SPEC PROJ

Work Type:

Ownership / Management

AWC: Cheshire

Statewide: No

Owner: [redacted]

Manager:

Project Information

Status: Prelim Design Approved

Associated Projects:

SPS #:

Assignment ID:

AIS Score:

Patrol Find ID:

Budget Summary - Preferred Option

Replace ringed spacer cable with 556

2023

ID	Title	Status	Rev #	Contingency	Expenditure Amount	Net Estimate
1	[redacted] replace with 556 SC - opt1	Prelim	0	28%	$216,515	$216,515
				2023 Total:	**$216,515**	**$216,515**
				Total Project:	**$216,515**	**$216,515**

Project Option Summary

ID	Description	Segments	Preliminary Estimate	Construction Estimate	Variance	IEEE $/CMS	All (w/Storm)	Prfrd
O1	Replace ringed spacer cable with 556	1	$216,515	$0	100%	$235.55	$235.55	☑
O2	Replace ringed spacer cable with 336	2	$206,889	$0	100%	$225.06	$225.06	☐

Segments

ID	Title	Preliminary Estimate	Construction Estimate	Variance	IEEE $/CMS	All (w/Storm)
1	[redacted] replace with 556 SC - opt1	$216,515			$235.39	$235.39
2	Reconductor with 336 SC opt2	$206,889			$224.93	$224.93

Segment CD01780-01

Estimate

	Preliminary Estimate Summary
Revision Number:	0
Contingency:	28.00%
SubTotal:	$169,152
Contingency Amount:	$47,363
Estimate:	$216,515
Reimbursement:	$0
Net Amount:	**$216,515**

Description:

Item Description	CU	$ / Per	Qty	Amount
SWITCHING OH/DB/UG - SWITCHING NonNetwork - Average	16-ALL17	[redacted]		$3,509.60
TRAFFIC OH/DB/UG - Traffic Control - Police Officer	16-ALL18			$10,000.00
OH WIRE OH - Reconductor w/Spacer Cable - 556 kcmil On N Wall St., Meriden, from pole 1899 to 2730.	16-OH29			$96,256.00
XF OH - OH XF's - bank of 3-1ph On pole 1901	16-OH46			$5,019.20
POLETOP OH - Replace wood xarm with composite xarm - 3ph On poles: 1899, 1901, 3757, 3756, 4066, 2730	16-OH17A			$8,428.80
XF OH - OH XF - 1ph On poles: 1899, 3756, 2730	16-OH45			$6,328.80
SECTIONALIZE OH - Cutouts or Arresters - 3ph On poles: 1899. 3756, 4066, and 2730. For single phase delta transformers.	16-OH20			$9,260.80
SECTIONALIZE OH - Cutouts or Arresters - 3ph On poles: 1901 and 3757	16-OH20	[redacted]		$4,630.40
POLE OH - POLE - 3ph (CL&P custodian) Poles: 1899, 1900, 1901, 3757, 3756, 2730	16-OH14			$14,028.00

Design Alternative CD01780-02

Estimate

	Preliminary Estimate Summary
Revision Number:	0
Contingency:	28.00%
SubTotal:	$161,632
Contingency Amount:	$45,257
Estimate:	$206,889
Reimbursement:	$0
Net Amount:	**$206,889**

Description:

Item Description	CU	$ / Per	Qty	Amount
SWITCHING OH/DB/UG - SWITCHING NonNetwork - Average	16-ALL17	[redacted]		$3,509.60
TRAFFIC OH/DB/UG - Traffic Control - Flagger	16-ALL19			$10,000.00
OH WIRE OH - Reconductor w/Spacer Cable - 336 kcmil On N Wall St., Meriden, from pole 1899 to 2730.	16-OH28			$88,736.00
XF OH - OH XF's - bank of 3-1ph On pole 1901	16-OH46			$5,019.20
POLETOP OH - Replace wood xarm with composite xarm - 3ph On poles: 1899, 1901, 3757, 3756, 4066, 2730	16-OH17A			$8,428.80
XF OH - OH XF - 1ph On poles: 1899, 3756, 2730	16-OH45			$6,328.80
SECTIONALIZE OH - Cutouts or Arresters - 3ph On poles: 1899. 3756, 4066, and 2730. For single phase delta transformers.	16-OH20			$9,260.80
SECTIONALIZE OH - Cutouts or Arresters - 3ph On poles: 1901 and 3757	16-OH20	[redacted]		$4,630.40
POLE OH - POLE - 3ph (CL&P custodian) Poles: 1899, 1900, 1901, 3757, 3756, 2730	16-OH14			$14,028.00

C. Geographic Map



D System One-Line



Photo of one area with ringed cable

