EVERSOURCE

Project Approval Form

Project Title: Pine Ridge Rd, Greenwich – Conv. & Recon	Project Number: CD02295
Date Prepared: 03/05/2024	**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:** No
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: $849.7K	**Authorization Type:** Full Funding

1. Executive Summary

Full funding is being requested for this project at a cost of **$849.7K** which is 157% of the partial funding capital estimate of $538.5K. There is no scope change in the project. The variance between the full funding and partial funding estimate is due to the underestimated labor and material charges. For this project, the outside service charges were approximately $32K higher than expected, and account for $45K in unforeseen core boring pole sets. Additionally, the legacy estimating units used to produce the partial funding estimate are about 30% lower than the estimates used today, which contributed to the increased labor & material costs. The Original Project was presented as follows:

[redacted]

The total cost of the project will be $538.5k.

- *Project Location:*
  - *Division: Western*
  - *District: Stamford AWC*
  - *Town: Greenwich*

2. Project Cost Summary

Note: Dollar values are in thousands.

Capital Costs	2024	Year 2	Year 3+	Total
Internal Labor and Construction Equipment	67.4	0.0	0.0	67.4
Outside Services	220.2	0.0	0.0	220.2
Materials	30.2	0.0	0.0	30.2
Removals	89.7	0.0	0.0	89.7
Risk and Contingency	59.3	0.0	0.0	59.3
Other	34.2	0.0	0.0	34.2
Subtotal	**501.0**	**0.0**	**0.0**	**501.0**

Indirect Capital Costs	2024	Year 2	Year 3+	Total
Indirects/Overheads (including benefits)	348.7	0.0	0.0	348.7
Capitalized interest or AFUDC, if any	0.0	0.0	0.0	0.0
Subtotal	**348.7**	**0.0**	**0.0**	**348.7**
Total Capital Costs (Gross)	**849.7**	**0.0**	**0.0**	**849.7**
Less Total Customer Contribution	**0.0**	**0.0**	**0.0**	**0.0**
Project Costs (Net of Reimbursement)	**849.7**	**0.0**	**0.0**	**849.7**

3. Technical Justification

Background, Project Need/Justification, and Project Scope

a. Background

Outage History showing three event occurrences from past 4 years.

[redacted]

[redacted]

b. Project Need

[redacted]

c. Project Scope

To resolve the above issues, this project proposes the following under preferred option 1.

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

Major Material:

- 5,265’ 336 175 Mil Tree Wire (Single phase)
- 28 40 class 1 poles

- 6 25 kVA Transformers
- 3 Trip Savers

4. Alternatives Considered

Option 1 is to partially [redacted]

The cost of this option is $640.8K, which is $208.85K less than the preferred option which costs $849.65K. This option was not selected due to aging infrastructure and leaving 14 customers at 4.8 kV. Please note the cost has been adjusted based on updating the estimating units to account for the legacy estimating units (increased 30%).

Option 2 proposes full [redacted]

Option 3 is to do nothing. This option was not chosen because customers would continue to experience outages.

Project Option Comparison

	Option [redacted]		
Authorization Type	**Partial**	**Full**	
Capital Cost	$618.4k	$849.65k	
Expense Cost	$22.40k	$ -	
Total Cost	$640.8k	$849.65k	$0
Cost / CM Saved	$36.39/CM	$45.66/CM	$/CM
Cost / CI Saved	$63,146.21 /CI	$79,221.03/CI	$/CI
Preferred option		X	

5. Project Schedule

Add any additional milestones that are pertinent to the project

Milestone/Phase Name	Estimated Date
Partial Approval	Aug 2023
100% Detailed Engineering Completion	July 2024
Fully Funded	Aug 2024
Construction Start	Nov 2024
In Service Date	Dec 2024

6. Regulatory Decisions

N/A

7. Codes and Standards

N/A

8. Risk and Contingencies

Contingencies: 24% was added as contingency i.e., $110,138 to accommodate any risks that are not yet known and do not yet have mitigation plans. And 30% additional cost was added i.e., $105,902.to accommodate for contractor costs.

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	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.

9. References

References
1. NA

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

Attachment		Included in Submittal?
A. Geographic Map	CD02295 - Geo Map.pdf	*YES*
B. Cost Estimate	CD02295_project_needs_statement.pdf	*YES*
C. Trouble Ticket	Trouble Ticket.pdf	*YES*



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Project Approval Form



Attachment - A. Geographic Map (Cont'd)



Attachment - B. Cost Estimate

Connecticut Light & Power
A Northeast Utilities Company

Specific Project Proposal - Project #: CD02295

Pine Ridge Rd, Greenwich Conv. & Recon.

Design Alternative CD02295-01

Estimate

	Preliminary Estimate Summary
Revision Number:	0
Contingency:	24.00%
SubTotal:	$458,909
Contingency Amount:	$110,138
Estimate:	$569,047
Reimbursement:	$0
Net Amount:	**$569,047**

Description:

Item Description	CU	[redacted]	Amount
SWITCHING OH/DB/UG - SWITCHING NonNetwork - Average	23-ALL17		$4,562.48
TRAFFIC OH/DB/UG - Traffic Control - Flagger	23-ALL19		$5,000.00
OH WIRE OH - Remove circuit wire (1 phase)	23-OH37		$16,629.60
EQUIPMENT OH - Conversion Prep Work - 1ph	23-OH56		$44,990.40
EQUIPMENT OH - Conversion - CUTOVER 1 fuse and 11 xfrm locations	23-OH58		$4,870.32
OTHER OTHER 30% contractor cost added.	23-ALL14		$105,902.00
SECTIONALIZE OH - Cutouts or Arresters - 1ph 30k on pole 72707 and 15k on pole 1831	23-OH19		$3,565.12
POLE OH - POLE - 1ph (Eversource custodian) Additional Poles	23-OH13		$41,241.20
SECTIONALIZE OH - Hydraulic Recloser - 1ph Install 1ph 65K TS on pole 1440	23-OH40		$8,911.76

Attachment - B. Cost Estimate (Cont'd)

Connecticut Light & Power
A Northeast Utilities Company

Specific Project Proposal - Project #: CD02295
Pine Ridge Rd, Greenwich Conv. & Recon.

Design Alternative		[redacted]	CD02295-01
OH WIRE OH-Reconductor w/175 Mil Tree Wire-1ph (any gauge) Reconductor existing #2 ACSR with 336 TW	23-OH25		$6,240.00
OH WIRE OH-Reconductor w/175 Mil Tree Wire-1ph (any gauge) Reconductor existing #4 Cu with 336 TW	23-OH25		$42,120.00
OH WIRE OH-Reconductor w/175 Mil Tree Wire-1ph (any gauge) Reconductor existing #6 Cu with 336 TW	23-OH25		$70,200.00
OH WIRE OH-Reconductor w/175 Mil Tree Wire-1ph (any gauge) Reconductor existing 1/0 TW with 336 TW	23-OH25		$47,736.00
EQUIPMENT OH - Remove Capacitor, any kVAR Remove Step on pole 72705	23-OH54		$2,340.00
TREE OH - Tree Trimming Sam Berg - Estimates	23-OH61		$54,600.00

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Attachment - C. Trouble Ticket

TROUBLE TICKET

TROUBLE CALL #		WORK REQUEST #

STREET	NEAREST CROSS STREET	TOWN
Pine Ridge Rd	STANwich Rd	GRN

CUSTOMER NAME	DATE	START TIME	COMP TIME
	7/13/23		

POLE/PAD #	REFERENCE POLE NUMBER	CIRCUIT NUMBER
[redacted]		[redacted]

TROUBLE PERSON'S REPORT/ NATURE OF TROUBLE /JOB SITE

STATEMENT AS RECEIVED: Reconductor / conver 27 sections of copper wire 10 OH TRANSFORMERS FROM Pole # 72705

POLICE CASE #	POLE SET	BY WHO	STREETLIGHT WORK
	☐ YES	☐ EVERSOURCE ☐ TELEPHONE	☐ YES ☐ NO

SL SIZE: _____ WATTS	SL FIXTURE:	MULTIPLE FIXTURES	STREETLIGHT FEED
☐ HPS ☐ MH ☐ MV ☐ INC	☐ COBRA ☐ PTT ☐ FLOOD ☐ PREM. DEC ☐ OTHER	☐ YES ☐ NO	☐ OH ☐ UG

TELEPHONE CO. NOTIFIED	TRAFFIC CONTROL	CONTRACTOR HIRED	DIG UP DATA
☐ YES ☐ NO	☐ STATE ☐ MUNICIPAL ☐ PRIVATE ☐ NONE	☐ YES ☐ NO	☐ YES ☐ NO

ALL WORK COMPLETED?	RESTORED	FACILITIES MARKED	CORRECTLY
☐ YES ☐ NO	☐ TEMP ☐ PERM	☐ YES ☐ NO	☐ YES ☐ NO

☐ WORK PERFORMED

☐ REMAINING

TRANSFORMER INFORMATION

INSTALL

	SIZE KVA	MANUFACTURER	STOCK CODE	SERIAL NUMBER
1				
2				
3				

PHASE	NO. OF WIRES	SECONDARY VOLTAGE	CONSTRUCTION TYPE	AMT.
		/	☐ OH ☐ DB ☐ UG	☐ CO ☐ ARR

REMOVE

	SIZE KVA	MANUFACTURER	STOCK CODE	SERIAL NUMBER
1				
2				
3				

PHASE	NO. OF WIRES	SECONDARY VOLTAGE	CONSTRUCTION TYPE	AMT.
		/	☐ OH ☐ DB ☐ UG	☐ CO ☐ ARR

TROUBLEM	DATE	SKETCH (Please Check if yes)
[redacted]	7/13/23	☐ OVER

GP9600 REV.

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Project Approval Form

Project Title: Pine Ridge Rd, Greenwich – Conv. & Recon	Project Number: CD02295
Date Prepared: 07/20/2023	**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:** No
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: $538.5k	**Authorization Type:** Partial Funding

1. Executive Summary

[redacted]

The total cost of the project will be $538.5k.

- Project Location:
  - Division: Western
  - District: Stamford AWC
  - Town: Greenwich

2. Project Cost Summary

Note: Dollar values are in thousands.

Capital Costs	Year 2024	Year 2025	Year 2026+	Total
Direct Capital Costs				
Internal Labor and Construction Equipment	28.2	0.0	0.0	28.2
Outside Services	190.9	0.0	0.0	190.9
Materials	76.6	0.0	0.0	76.6
Removals	67.4	0.0	0.0	67.4
Risk and Contingency	2.6	0.0	0.0	2.6
Other	0.0	0.0	0.0	0.0
Subtotal – Direct Costs	**365.6**	**0.0**	**0.0**	**365.6**
Indirect Capital Costs				
Indirect/Overheads (including benefits)	162.1	0.0	0.0	162.1
Capitalized interest or AFUDC, if any	10.7	0.0	0.0	10.7
Subtotal – Indirect Costs	**172.9**	**0.0**	**0.0**	**172.9**
Total Gross Capital Costs	**538.5**	**0.0**	**0.0**	**538.5**
Customer Contribution	**0.0**	**0.0**	**0.0**	**0.0**
Total Net Capital Project Costs	**538.5**	**0.0**	**0.0**	**538.5**

3. Technical Justification

Background, Project Need/Justification, and Project Scope

a. Background

Outage History showing three event occurrence from past 4 years.

[redacted]

b. Project Need

[redacted]

c. Project Scope

To resolve the above issues, this project proposes the following under preferred option 1.

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

Major Material:

- 5,265' 336 175 Mil Tree Wire (Single phase)
- 28 40 class 1 poles
- 6 25 kVA Transformers
- 3 Trip Savers

4. Alternatives Considered

Option 1 is to [redacted]

The cost of this option is $152,742.80 less than the preferred option. This option was not selected due to aging infrastructure and leaving 14 customers at 4.8 kV.

Option 3 is to table this project and proceed when needed.

Project Option Comparison

[redacted]			
Authorization Type	Partial	Partial	
Capital Cost	$393.90k	$538.50k	
Expense Cost	$22.40k	$30.60k	
Total Cost	$416.30k	$569.05k	$0
Cost / CM Saved	$22.37/CM	$30.58/CM	$/CM
Cost / CI Saved	$38,816.24 /CI	$53,058.00/CI	$/CI
Preferred option		X	

5. Project Schedule

Add any additional milestones that are pertinent to the project.

Milestone/Phase Name	Estimated Date
Partial Approval	Aug 2023
100% Detailed Engineering Completion	July 2024

Milestone/Phase Name	Estimated Date
Fully Funded	Aug 2024
Construction Start	Nov 2024
In Service Date	Dec 2024

6. Regulatory Decisions

No.

7. Codes and Standards

NA

8. Risk and Contingencies

Contingencies: 24% was added as contingency i.e., $110,138 to accommodate any risks that are not yet known and do not yet have mitigation plans. And 30% additional cost was added i.e., $105,902.to accommodate for contractor costs.

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C. Trouble Ticket	Trouble Ticket.pdf	*YES*

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Project Approval Form

Project Title: Pine Ridge Rd, Greenwich – Conv. & Recon	Project Number: CD02295
Date Prepared: 07/20/2023	**Company:** Eversource CT
Organization: Distribution Engineering	**Class(es) of Plant:** D Line
Project Initiator: [redacted]	**Project Category** RELIABILITY IMPROVE SPEC PROJ
Project Manager: [redacted]	**Project Type:** Specific
Project Sponsor: [redacted]	**Capital Investment part of 5-year plan?** No
	Emergency Related Request? No
Total Request ($): $30k	**Authorization Type:** Initial Funding

1. Project Need Statement

[redacted]

2. Project Objectives

The objective of this project is to assess and address aging infrastructure on Pine Ridge Rd, Greenwich.

Project Initiator: _____

Engineering Approval: _____