EVERSOURCE
Project Approval Form

Project Title: [redacted] **ROW Removal**	**Project Number: CD02211**
Date Prepared: 05/10/2024	**Company:** Eversource CT
Organization: Distribution Engineering	**Project Category:** RIGHT OF WAY LINES
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: 12/31/2025	
Total Capital Request: $3.613M	**Authorization Type:** Full Funding

1. Executive Summary

Full funding is being requested for this project at a cost of $**3.613M** which is 125% of the partial funding capital estimate of $2.88M. Partial funding was approved on 12/07/2023. There is no scope change on the project. The variance between the full funding and partial funding estimate is due to 2025 numbers being based on the partial funding PAF direct charges loaded with allocations using new rates, which have increased since partial funding approval. Additionally, there is a 7.5% contingency included in the total which was not reflected in the partial PAF. Safety provisions and the preference for removal and replacement over repairs also drove the increase in cost for this project.

The original project was presented as follows:

This project was created in order to address the obsolete Right of Ways (ROWs) in Stonington, CT. These ROWs have remained de-energized for over a decade and are now hazardous assets. Furthermore, these inactive ROWs have warranted repairs due to customer complaints as the infrastructure here is not maintained to current operating ROW standards.

Division: *Eastern*

District: *New London AWC*

Town: *Stonington*

2. Project Cost Summary

Note: Dollar values are in thousands.

Capital Costs	2024	2025	Year 3+	Total
Internal Labor and Construction Equipment	23.9	635.0	0.0	658.9
Outside Services	193.8	470.4	0.0	664.2
Materials	0.1	40.5	0.0	40.6
Removals	31.1	170.3	0.0	201.4
Risk and Contingency	34.0	218.1	0.0	252.1
Other	0.0	13.7	0.0	13.7
Subtotal	**282.9**	**1,548**	**0.0**	**1,830.9**

Indirect Capital Costs	2024	2025	Year 3+	Total
Indirects/Overheads (including benefits)	204.7	1,577.8	0.0	1,782.5
Capitalized interest or AFUDC, if any	0.0	0.0	0.0	0.0
Subtotal	**204.7**	**1,577.8**	**0.0**	**1,782.5**
Total Capital Costs (Gross)	**487.6**	**3,125.8**	**0.0**	**3,613.4**
Less Total Customer Contribution	**0.0**	**0.0**	**0.0**	**0.0**
Project Costs (Net of Reimbursement)	**487.6**	**3,125.8**	**0.0**	**3,613.4**

3. Technical Justification

Background, Project Need/Justification, and Project Scope

a. Background



b. Project Need

Due to the deteriorating and obsolete infrastructure of these ROWs, this project proposes the complete asset removal of all conductor and poles while retaining ROW rights throughout. These ROWs, upon drone inspection in January of 2021, contain 36 priority poles. These poles range from priority 5 to 3 with many of the poles being priority 3 (pole damage severity increases as priority number decreases). Damaged conditions include cracked/rotted crossarms, rotted pole tops, displaced insulators, and broken braces. Most crossarm poles are 40', installed 1965.

These ROWs are notably overgrown with vegetation as they have not been upkept. Access into the ROWs has greatly diminished for both vehicles and personnel.

Successful execution of this project will result in the complete removal of all hazardous assets contained within these ROWs, including the need to replace all tagged priority poles. Additionally, eliminating these obsolete ROWs would prevent the need to reconductor with higher-rated tree wire, perform pole replacements (both class and height upgrades), and routine ROW maintenance per DSEM 06.301 – Pole Replacement and DSEM 06.651 – Spacing of Distribution Lines in Right of Way. Failing to perform these removals will result in a costly rehabilitation project within the ROW to keep it within current standards, neglect to mitigate customer complaints, and will continue to warrant repairs as necessary.

During the SDC meeting on 10/05, it was requested that the urgency for removal across [redacted] be identified based upon current infrastructure integrity. Upon on field inspection, it was determined that these crossings should be removed in 2024 versus 2025. Furthermore, another estimate was added which accounted for costs associated with shutting down [redacted] in order to perform said removals.

Another request was to verify the tree trimming costs for these ROWs as they seemed low. After speaking with the arborist and adjusting some estimates, the trimming estimates were increased for the work to be done here. As a result of both the [redacted] shutdown and trimming estimate, the total capital cost increased from $2,388K to $2,653K (11% increase). While the cost increased, the scope of work remained the same.

During the CPAC meeting on 11/09, it was requested that the [redacted] crossing be field verified once again for removal feasibility in 2024. After patrolling the areas, it was determined that the north part of each crossing (this is above the southbound lane) pose no issue for access and removal. The same is true for the highway medians when utilizing both the north and southbound lanes. For the south part of each crossing (this is below the northbound lane), access to these areas would require more matting and trimming to reach the poles from openings located further south in each section of the ROW. This approach would be working inward toward the highway, contrary to how the north sections will be addressed by working outward from the highway. With a more detailed plan of removal, it was determined that the capital estimate for Phase 1 removal of the highway crossings would be $457K. Overall, the total capital cost increased from $2,653K to $2,887K (9% increase). Again, while the cost increased, the scope of the work remained unchanged. These increases were due to matting estimate increases, additional I-95 crossing considerations, additional T+D Right of Way considerations, and contingency adders.

After speaking with the environmental team, it was determined that in order to properly map wetland boundaries and survey the ROW, some trimming/mowing is required. With the current condition of the ROW, many areas were impassable and data was interpolated in those areas. Under this project, the environmental group and vegetation management will work in conjunction with one another to clear an accessible path in order to complete environmental surveying and potential permitting.

Similarly, after a discussion with the T+D Right of Way group, it was also determined that some trimming/mowing would be required for the T+D Right of Way team to complete their set of surveying, flagging, and monumentalizing within these ROWs. Furthermore, it was stated that leaving stub poles is not required for every pole in the ROW. Stub poles may be utilized to further define the limits of our rights within the ROW in addition to installing monuments along the length of the ROW. Moreover, leaving stub poles compared to removing the pole in its entirety has less of an environmental impact on the land. This can be advantageous in areas that are more environmentally sensitive to the removal. Lastly, for poles that are in good condition, it

is possible to repurpose these poles for osprey nesting platforms rather than taking down the pole in its entirety.

c. Project Scope

This project proposes three options, the scope of the preferred option, Option 3, is as follows:

Phase 1 (2024):

- Initiate T+D Right of Way permitting across the ROW for I-95 crossings
- Begin vegetation trimming across the I-95 ROW sections in compliance and conjunction with Environmental and T+D Right of Way groups
- Complete Environmental Surveying and Permitting requests for I-95 crossings
- Initiate permission requests for I-95 highway shutdown
- Remove conductor and poles from two crossings over I-95 (refer to Figure 3)
  - 3 crossarms, 7 H-frames (includes 4 priority poles)
  - 2,700’ (0.5 miles) 3ph 2/0 Bare CU
  - Monumentalize and retain rights to territory

Phase 2 (2025):

- Complete T+D Right of Way permitting across the remaining ROW sections
- Continue vegetation trimming across the remaining sections of the ROWs in compliance and conjunction with Environmental and T+D Right of Way groups
- Complete Environmental Surveying and Permitting requests for remaining ROW sections
- Remove remainder of the [redacted] (refer to Figure 4)
  - [redacted]
  - [redacted] 2/0 Bare CU
  - Monumentalize and retain rights to territory
- Remove remainder of the [redacted] (refer to Figure 4)
  - [redacted]
  - [redacted] 3ph 2/0 Bare CU
  - Monumentalize and retain rights to territory

Summary of Asset Removal:

[redacted]

Major Materials:

- Matting

It is worthy to note that there is a substantial amount of bare copper conductor being removed here. The scrap value of copper would be relevant (33,400' of 3ph 2/0 Bare CU = 100,000' of conductor).

4. Alternatives Considered

Option 1: Remove the remainder of the [redacted] This involves removing [redacted]. While this option addresses the [redacted], it does not include the [redacted] which is why this option was not selected.

Option 2: Remove a portion of the [redacted]. This involves solely removing the conductor and poles that cross over two sections of [redacted]. While this option addresses the most concerning/hazardous portions of the ROW (the sections that are above I-95), the preferred option includes this section in addition to the rest of the ROWs. Furthermore, this area on I-95 would have removal work prioritized first in the preferred option.

Design Criteria	Option		
	1 – Remove [redacted] ROW (green and blue sections)	2 – Remove the [redacted] crossings (blue section only)	3 – Remove [redacted] and [redacted] (green, blue, and orange sections)
Eliminate [redacted] ROW	X		X
Eliminate [redacted] ROW			X
Eliminate all H-frames	X	X	X
Eliminate all ROW Priority Poles			X
Eliminate future O&M spending for repairs	X	X	X
Authorization Type	Partial	Partial	Full
Capital Cost	$1,804,534	$457,284	$3,613,368

Expense Cost	$43,706	$11,076	$144,534
Total Cost	$1,848,240	$468,360	$3,757,902
Preferred option			

Doing nothing is not recommended as it will not address the safety hazards and concerns in these areas. Infrastructure will continue to deteriorate resulting in more repairs, which in turn, will create a rise in maintenance costs and customer complaints.

5. Project Schedule

Milestone/Phase Name	Estimated Date
Partial Approval	December 7, 2023
100% Detailed Engineering Completion for I-95 Crossing Removal	March 1, 2024
Partially Fully Funded for I-95 Crossing Removal	April 1, 2024
Construction Start for I-95 Crossing Removal	May 1, 2024
100% Detailed Engineering Completion for remainder of ROW	June 1, 2024
Fully Funded	July 1, 2024
Construction Start for remainder of ROW	February 1, 2025
Project Completion	December 31, 2025

6. Regulatory Decisions

N/A

7. Codes and Standards

DSEM 06.301 – Pole Replacement
DSEM 06.651 – Spacing of Distribution Lines in Right of Way

8. Risk and Contingencies

Contingencies: 24% contingency was added for 2024 work. Similarly, 28% was added as contingency for 2025 work. This contingency accounts for any risks that are unknown and do not have mitigation plans.

Risk Event	Risk Horizon	Likelihood of Occurrence	Risk Mitigation
Actual cost higher than estimated due to scope changes.	2025	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	2025	Medium	Design to minimize customer impact. Project Preplanning and customer/community outreach.
Internal construction resources not available to perform the work.	2025	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.	2025	Low	Plan internal resources to perform the work. Use competitive bidding to ensure lowest outside labor cost.
Materials Shortage or long lead times	2025	Low	Pre-order long lead time material; minimize the use of non-standard and non-stocked material.
Storm delays	2025	Medium	If storm activity delays work, we may be forced to use external resources.
System abnormal configuration	2025	Low	Schedule work to minimize system abnormal time. Install temporary bypasses/equipment if system will be abnormal for extended periods.

Wetlands / Environmentally sensitive area	2025	High	Use of mats and specialty equipment, only work during certain times of the year.

9. References

References
1. DSEM 06.301 – Pole Replacement
2. DSEM 06.651 – Spacing of Distribution Lines in Right of Way

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

Attachment	Included in Submittal?
A1. Partial Funding PAF	*YES*
A. Cost Estimate	*YES*
B. Geographic Map	*YES*
C. Load Sheet	*YES*
D. Initial Funding PAF	*YES*
E. Project Authorization Checklist	*YES*

Attachment - A1: Partial Funding PAF

Project Title: [redacted] **ROW Removal**	**Project Number: CD02211**
Date Prepared: 12/07/2023	**Company:** Eversource CT
Organization: Distribution Engineering	**Project Category:** RIGHT OF WAY LINES
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: 12/31/2025	
Total Capital Request: $2,887K	**Authorization Type:** Partial Funding

1. Executive Summary

This project was created in order to address the obsolete Right of Ways (ROWs) in Stonington, CT. These ROWs have remained de-energized for over a decade and are now hazardous assets. Furthermore, these inactive ROWs have warranted repairs due to customer complaints as the infrastructure here is not maintained to current operating ROW standards.

Division: Eastern
District: New London AWC
Town: Stonington

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	92.6	492.0	0.0	584.6
Outside Services	65.3	346.9	0.0	412.2
Materials	8.7	46.4	0.0	55.1
Removals	80.7	428.9	0.0	509.7
Other	2.9	15.7	0.0	18.6
Risk and Contingency	0.0	0.0	0.0	0.0
Subtotal – Direct Costs	**250.3**	**1,329.9**	**0.0**	**1,580.2**
Indirect Capital Costs				
Indirect/Overheads (including benefits)	202.8	1,077.3	0.0	1,280.1
Capitalized interest or AFUDC, if any	4.2	22.1	0.0	26.3
Subtotal – Indirect Costs	**207.0**	**1,099.5**	**0.0**	**1,306.4**
Total Gross Capital Costs	**457.3**	**2,429.4**	**0.0**	**2,886.6**
Customer Contribution	**0.0**	**0.0**	**0.0**	**0.0**
Total Net Capital Project Costs	**457.3**	**2,429.4**	**0.0**	**2,886.6**

3. Technical Justification

Background, Project Need/Justification, and Project Scope

a. Background

[redacted]

b. Project Need

Due to the deteriorating and obsolete infrastructure of these ROWs, this project proposes the complete asset removal of all conductor and poles while retaining ROW rights throughout. These ROWs, upon drone inspection in January of 2021, contain 36 priority poles. These poles range from priority 5 to 3 with many of the poles being priority 3 (pole damage severity increases as priority number decreases). Damaged conditions include cracked/rotted crossarms, rotted pole tops, displaced insulators, and broken braces. Most crossarm poles are 40', installed 1965.

These ROWs are notably overgrown with vegetation as they have not been upkept. Access into the ROWs has greatly diminished for both vehicles and personnel.

Successful execution of this project will result in the complete removal of all hazardous assets contained within these ROWs, including the need to replace all tagged priority poles. Additionally, eliminating these obsolete ROWs would prevent the need to reconductor with higher-rated tree wire, perform pole replacements (both class and height upgrades), and routine ROW maintenance per DSEM 06.301 – Pole Replacement and DSEM 06.651 – Spacing of Distribution Lines in Right of Way. Failing to perform these removals will result in a costly rehabilitation project within the ROW to keep it within current standards, neglect to mitigate customer complaints, and will continue to warrant repairs as necessary.

During the SDC meeting on 10/05, it was requested that the urgency for removal across [redacted] be identified based upon current infrastructure integrity. Upon on field inspection, it was determined that these crossings should be removed in 2024 versus 2025. Furthermore, another estimate was added which accounted for costs associated with shutting down [redacted] in order to perform said removals.

Another request was to verify the tree trimming costs for these ROWs as they seemed low. After speaking with the arborist and adjusting some estimates, the trimming estimates were increased for the work to be done here. As a result of both the [redacted] shutdown and trimming estimate, the total capital cost increased from $2,388K to $2,653K (11% increase). While the cost increased, the scope of work remained the same.

During the CPAC meeting on 11/09, it was requested that the [redacted] crossing be field verified once again for removal feasibility in 2024. After patrolling the areas, it was determined that the north part of each crossing (this is above the southbound lane) pose no issue for access and removal. The same is true for the highway medians when utilizing both the north and southbound lanes. For the south part of each crossing (this is below the northbound lane), access to these areas would require more matting and trimming to reach the poles from openings located further south in each section of the ROW. This approach would be working inward toward the highway, contrary to how the north sections will be addressed by working outward from the highway. With a more detailed plan of removal, it was determined that the capital estimate for Phase 1 removal of the highway crossings would be $457K. Overall, the total capital cost increased from $2,653K to $2,887K (9% increase). Again, while the cost increased, the scope of the work remained unchanged. These increases were due to matting estimate increases, additional [redacted] crossing considerations, additional T+D Right of Way considerations, and contingency adders.

After speaking with the environmental team, it was determined that in order to properly map wetland boundaries and survey the ROW, some trimming/mowing is required. With the current condition of the ROW, many areas were impassable and data was interpolated in those areas. Under this project, the environmental group and vegetation management will work in conjunction with one another to clear an accessible path in order to complete environmental surveying and potential permitting.

Similarly, after a discussion with the T+D Right of Way group, it was also determined that some trimming/mowing would be required for the T+D Right of Way team to complete their set of surveying, flagging, and monumentalizing within these ROWs. Furthermore, it was stated that leaving stub poles is not required for every pole in the ROW. Stub poles may be utilized to further define the limits of our rights within the ROW in addition to installing monuments along the length of the ROW. Moreover, leaving stub poles compared to removing the pole in its entirety has less of an environmental impact on the land. This can be advantageous in areas that are more environmentally sensitive to the removal. Lastly, for poles that are in good condition, it is possible to repurpose these poles for osprey nesting platforms rather than taking down the pole in its entirety.

c. Project Scope

This project proposes three options, the scope of the preferred option, Option 3, is as follows:

Phase 1 (2024):

- Initiate T+D Right of Way permitting across the ROW for [redacted] crossings
- Begin vegetation trimming across the [redacted] sections in compliance and conjunction with Environmental and T+D Right of Way groups
- Complete Environmental Surveying and Permitting requests for [redacted] crossings
- Initiate permission requests for [redacted] shutdown
- Remove conductor and poles from two crossings over [redacted] (refer to Figure 3)
  - [redacted]
  - [redacted]
  - [redacted]

Phase 2 (2025):

- Complete T+D Right of Way permitting across the remaining ROW sections
- Continue vegetation trimming across the remaining sections of the ROWs in compliance and conjunction with Environmental and T+D Right of Way groups
- Complete Environmental Surveying and Permitting requests for remaining ROW sections

[redacted]

Summary of Asset Removal:

[redacted]

Major Materials:

- Matting

It is worthy to note that there is a substantial amount of bare copper conductor being removed here. The scrap value of copper would be relevant (33,400' of 3ph 2/0 Bare CU = 100,000' of conductor).

4. Alternatives Considered

Option 1: Remove the remainder of the [redacted] This involves removing [redacted]' of 3ph 2/0 Bare CU, 123 crossarms, and 7 H-frames. While this option addresses the [redacted], it does not include the 13K49 ROW which is why this option was not selected.

Option 2: Remove a portion of the [redacted]. This involves solely removing the conductor and poles that cross over two sections of I-95: 2,100' of 3ph 2/0 Bare CU and 7 H-frames. While this option addresses the most concerning/hazardous portions of the ROW (the sections that are above I-95), the preferred option includes this section in addition to the rest of the ROWs. Furthermore, this area on I-95 would have removal work prioritized first in the preferred option.

Design Criteria	Option		
	1 – Remove [redacted] ROW (green and blue sections)	**2 – Remove the [redacted] crossings (blue section only)**	**3 – Remove [redacted] and [redacted] ROWs (green, blue, and orange sections)**
Eliminate [redacted] ROW	X		X
Eliminate [redacted] ROW			X
Eliminate all H-frames	X	X	X
Eliminate all ROW Priority Poles			X
Eliminate future O&M spending for repairs	X	X	X
Authorization Type	Partial	Partial	Partial
Capital Cost	$1,804,534	$457,284	$2,886,648
Expense Cost	$43,706	$11,076	$69,915
Total Cost	$1,848,240	$468,360	$2,956,563
Preferred option			**X**

Doing nothing is not recommended as it will not address the safety hazards and concerns in these areas. Infrastructure will continue to deteriorate resulting in more repairs, which in turn, will create a rise in maintenance costs and customer complaints.

5. Project Schedule

Milestone/Phase Name	Estimated Date
Partial Approval	December 7, 2023
100% Detailed Engineering Completion for I-95 Crossing Removal	March 1, 2024
Partially Fully Funded for I-95 Crossing Removal	April 1, 2024
Construction Start for I-95 Crossing Removal	May 1, 2024
100% Detailed Engineering Completion for remainder of ROW	June 1, 2024
Fully Funded	July 1, 2024
Construction Start for remainder of ROW	February 1, 2025
Project Completion	December 31, 2025

6. Regulatory Decisions

N/A

7. Codes and Standards

DSEM 06.301 – Pole Replacement

DSEM 06.651 – Spacing of Distribution Lines in Right of Way

8. Risk and Contingencies

Contingencies: 24% contingency was added for 2024 work. Similarly, 28% was added as contingency for 2025 work. This contingency accounts for any risks that are unknown and do not have mitigation plans.

Risk Event	Risk Horizon	Likelihood of Occurrence	Risk Mitigation
Actual cost higher than estimated due to scope changes.	2025	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	2025	Medium	Design to minimize customer impact. Project Preplanning and customer/community outreach.
Internal construction resources not available to perform the work.	2025	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.	2025	Low	Plan internal resources to perform the work. Use competitive bidding to ensure lowest outside labor cost.
Materials Shortage or long lead times	2025	Low	Pre-order long lead time material; minimize the use of non-standard and non-stocked material.
Storm delays	2025	Medium	If storm activity delays work, we may be forced to use external resources.
System abnormal configuration	2025	Low	Schedule work to minimize system abnormal time. Install temporary bypasses/equipment if system will be abnormal for extended periods.
Wetlands / Environmentally sensitive area	2025	High	Use of mats and specialty equipment, only work during certain times of the year.

9. References

References
1. DSEM 06.301 – Pole Replacement
2. DSEM 06.651 – Spacing of Distribution Lines in Right of Way

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

Attachment	Included in Submittal?
A. Cost Estimate	*YES*
B. Geographic Map	*YES*
C. Load Sheet	*YES*
D. Initial Funding PAF	*YES*
E. Project Authorization Checklist	*YES*

Attachment - A: Cost Estimates

Estimate

Preliminary
Estimate Summary

Revision Number:	0
Contingency:	24.00%
SubTotal:	$377,710
Contingency Amount:	$90,650
Estimate:	$468,360
Reimbursement:	$0
Net Amount:	**$468,360**
Description:	

Item Description	CU	[redacted]	Amount
OTHER OTHER 30% contractor adder applied to subtotal ($290,547)	23-ALL14		$87,164.00
POLE OH - Install/Replace Anchor and Guy Anchor and guy remaining poles after crossing is removed	23-OH14B		$1,713.92
OTHER OTHER Environmental estimate	23-ALL14		$3,000.00
OTHER OTHER I-95 highway shutdown	23-ALL14		$100,000.00
OTHER OTHER Matting estimate	23-ALL14		$100,000.00
OTHER OTHER Private land access (2 areas near crossing)	23-ALL14		$10,000.00
OTHER OTHER Remove 17 poles @ $1,000 each (3 xarm, 7 H-frame)	23-ALL14		$17,000.00
OH WIRE OH - Remove circuit wire (3 phase) Remove 3ph 2/0 CU (2,700')	23-OH37A		$11,232.00
OTHER OTHER T+D Right of Way post surveying estimate	23-ALL14		$1,600.00
OTHER OTHER T+D Right of Way survey estimate	23-ALL14		$16,000.00
TREE OH - Tree Trimming Trimming/mowing ($30,000)	23-OH61		$30,000.10

Option 3 (preferred)

Attachment - A: Cost Estimates (continued)

Estimate

	Preliminary Estimate Summary
Revision Number:	0
Contingency:	28.00%
SubTotal:	$622,062
Contingency Amount:	$174,177
Estimate:	$796,239
Reimbursement:	$0
Net Amount:	**$796,239**

Description:

Item Description	CU	[redacted]	Amount
OTHER OTHER 30% contractor adder applied to subtotal ($478,510)	23-ALL14		$143,553.00
OTHER OTHER Environmental estimate	23-ALL14		$4,000.00
OTHER OTHER Matting estimate	23-ALL14		$266,000.00
OH WIRE OH - Remove circuit wire (3 phase) Remove 3ph 2/0 CU (11,300')	23-OH37A		$47,008.00
OTHER OTHER Remove 40 poles at $1,000 each (40 xarms)	23-ALL14		$40,000.00
OTHER OTHER T+D Right of Way post surveying estimate	23-ALL14		$6,500.00
OTHER OTHER T+D Right of Way survey estimate	23-ALL14		$65,000.00
TREE OH - Tree Trimming Trimming/mowing ($50,000)	23-OH61		$50,000.60

Option 3 (preferred)

Attachment - A: Cost Estimates (continued)

Estimate

Preliminary Estimate Summary	
Revision Number:	0
Contingency:	28.00%
SubTotal:	$455,969
Contingency Amount:	$127,671
Estimate:	$583,640
Reimbursement:	$0
Net Amount:	**$583,640**

Description:

Item Description	CU	[redacted]	Amount
OTHER OTHER 30% contractor adder applied to subtotal ($350,746)	23-ALL14		$105,224.00
OTHER OTHER Environmental estimate	23-ALL14		$3,000.00
OTHER OTHER Matting estimate	23-ALL14		$184,000.00
OH WIRE OH - Remove circuit wire (3 phase) Remove 3ph 2/0 CU (8,400')	23-OH37A		$34,944.00
OTHER OTHER Remove 40 poles @ $1000 each (40 xarms)	23-ALL14		$40,000.00
OTHER OTHER T+D Right of Way post surveying estimate	23-ALL14		$4,800.00
OTHER OTHER T+D Right of Way survey estimate	23-ALL14		$48,000.00
TREE OH - Tree Trimming Trimming/mowing ($36,000)	23-OH61		$36,000.90

Option 3 (preferred)

Attachment - A: Cost Estimates (continued)

Estimate

	Preliminary Estimate Summary
Revision Number:	0
Contingency:	28.00%
SubTotal:	$865,878
Contingency Amount:	$242,446
Estimate:	$1,108,324
Reimbursement:	$0
Net Amount:	**$1,108,324**

Description:

Item Description	CU	[redacted]	Amount
OTHER OTHER 30% contractor adder applied to subtotal ($666,061)	23-ALL14		$199,818.00
OTHER OTHER Environmental estimate	23-ALL14		$5,000.00
OTHER OTHER Matting estimate	23-ALL14		$450,000.00
OH WIRE OH - Remove circuit wire (3 phase) Remove 3ph 2/0 CU (11,000')	23-OH37A		$45,760.00
OTHER OTHER Remove 40 poles @ $1,000 each (40 xarms)	23-ALL14		$40,000.00
OTHER OTHER T+D Right of Way post surveying estimate	23-ALL14		$6,300.00
OTHER OTHER T+D Right of Way survey estimate	23-ALL14		$63,000.00
TREE OH - Tree Trimming Trimming/mowing ($56,000)	23-OH61		$56,000.10

Option 3 (preferred)

Attachment - A: Cost Estimates (continued)

Estimate

Preliminary
Estimate Summary

Revision Number:	0
Contingency:	24.00%
SubTotal:	$377,710
Contingency Amount:	$90,650
Estimate:	$468,360
Reimbursement:	$0
Net Amount:	**$468,360**
Description:	

Item Description	CU	[redacted]	Amount
OTHER OTHER 30% contractor adder applied to subtotal ($290,547)	23-ALL14		$87,164.00
POLE OH - Install/Replace Anchor and Guy Anchor and guy remaining poles after crossing is removed	23-OH14B		$1,713.92
OTHER OTHER Environmental estimate	23-ALL14		$3,000.00
OTHER OTHER I-95 highway shutdown	23-ALL14		$100,000.00
OTHER OTHER Matting estimate	23-ALL14		$100,000.00
OTHER OTHER Private land access (2 areas near crossing)	23-ALL14		$10,000.00
OTHER OTHER Remove 17 poles @ $1,000 each (3 xarm, 7 H-frame)	23-ALL14		$17,000.00
OH WIRE OH - Remove circuit wire (3 phase) Remove 3ph 2/0 CU (2,700')	23-OH37A		$11,232.00
OTHER OTHER T+D Right of Way post surveying estimate	23-ALL14		$1,600.00
OTHER OTHER T+D Right of Way survey estimate	23-ALL14		$16,000.00
TREE OH - Tree Trimming Trimming/mowing ($30,000)	23-OH61		$30,000.10

Option 1

Attachment - A: Cost Estimates (continued)

Estimate

	Preliminary Estimate Summary
Revision Number:	0
Contingency:	28.00%
SubTotal:	$622,062
Contingency Amount:	$174,177
Estimate:	$796,239
Reimbursement:	$0
Net Amount:	**$796,239**

Description:

Item Description	CU	[redacted]	Amount
OTHER OTHER 30% contractor adder applied to subtotal ($478,510)	23-ALL14		$143,553.00
OTHER OTHER Environmental estimate	23-ALL14		$4,000.00
OTHER OTHER Matting estimate	23-ALL14		$266,000.00
OH WIRE OH - Remove circuit wire (3 phase) Remove 3ph 2/0 CU (11,300')	23-OH37A		$47,008.00
OTHER OTHER Remove 40 poles at $1,000 each (40 xarms)	23-ALL14		$40,000.00
OTHER OTHER T+D Right of Way post surveying estimate	23-ALL14		$6,500.00
OTHER OTHER T+D Right of Way survey estimate	23-ALL14		$65,000.00
TREE OH - Tree Trimming Trimming/mowing ($50,000)	23-OH61		$50,000.60

Option 1

Attachment - A: Cost Estimates (continued)

Estimate

Preliminary Estimate Summary	
Revision Number:	0
Contingency:	28.00%
SubTotal:	$455,969
Contingency Amount:	$127,671
Estimate:	$583,640
Reimbursement:	$0
Net Amount:	**$583,640**

Description:

Item Description	CU	[redacted]	Amount
OTHER OTHER 30% contractor adder applied to subtotal ($350,746)	23-ALL14		$105,224.00
OTHER OTHER Environmental estimate	23-ALL14		$3,000.00
OTHER OTHER Matting estimate	23-ALL14		$184,000.00
OH WIRE OH - Remove circuit wire (3 phase) Remove 3ph 2/0 CU (8,400')	23-OH37A		$34,944.00
OTHER OTHER Remove 40 poles @ $1000 each (40 xarms)	23-ALL14		$40,000.00
OTHER OTHER T+D Right of Way post surveying estimate	23-ALL14		$4,800.00
OTHER OTHER T+D Right of Way survey estimate	23-ALL14		$48,000.00
TREE OH - Tree Trimming Trimming/mowing ($36,000)	23-OH61		$36,000.90

Option 1

Attachment - A: Cost Estimates (continued)

Estimate

Preliminary
Estimate Summary

Revision Number:	0
Contingency:	24.00%
SubTotal:	$377,710
Contingency Amount:	$90,650
Estimate:	$468,360
Reimbursement:	$0
Net Amount:	**$468,360**

Description:

Item Description	CU	[redacted]	Amount
OTHER OTHER 30% contractor adder applied to subtotal ($290,547)	23-ALL14		$87,164.00
POLE OH - Install/Replace Anchor and Guy Anchor and guy remaining poles after crossing is removed	23-OH14B		$1,713.92
OTHER OTHER Environmental estimate	23-ALL14		$3,000.00
OTHER OTHER I-95 highway shutdown	23-ALL14		$100,000.00
OTHER OTHER Matting estimate	23-ALL14		$100,000.00
OTHER OTHER Private land access (2 areas near crossing)	23-ALL14		$10,000.00
OTHER OTHER Remove 17 poles @ $1,000 each (3 xarm, 7 H-frame)	23-ALL14		$17,000.00
OH WIRE OH - Remove circuit wire (3 phase) Remove 3ph 2/0 CU (2,700')	23-OH37A		$11,232.00
OTHER OTHER T+D Right of Way post surveying estimate	23-ALL14		$1,600.00
OTHER OTHER T+D Right of Way survey estimate	23-ALL14		$16,000.00
TREE OH - Tree Trimming Trimming/mowing ($30,000)	23-OH61		$30,000.10

Option 2

Attachment - B: Geographic Maps



Figure 1: Circuit Map



Attachment - B: Geographic Maps (continued)





Attachment - B: Geographic Maps (continued)





Figure 6: I-95 Removal Procedure

Attachment - B: Geographic Maps (continued)



Attachment - C: Load Sheets

[redacted]

Project Load Summary

[redacted]

Zone Load (Amps)	Contingency Loading (Amps)	Normal			Emergency		
		Rating	% of Rating	Limiting Factor	Rating	% of Rating	
355	-	600	59%	556 AL s/c	710	50%	
93	448	600	75%	556 AL s/c	710	63%	
158	513	600	86%	556 AL s/c	710	72%	
288	-	460	63%	336 ALTW	520	55%	
93	381	460	83%	336 ALTW	520	73%	
158	446	460	97%	336 ALTW	520	86%	
126	-	375	34%	2/0 Bare CU	450	28%	
93	219	375	58%	2/0 Bare CU	450	49%	
158	284	375	76%	2/0 Bare CU	450	63%	
20	-	325	6%	1/0 Bare CU	385	5%	
93	113	325	35%	1/0 Bare CU	385	29%	
158	178	325	55%	1/0 Bare CU	385	46%	
Xfmr Load (MVA)	Contingency Loading (MVA)	Normal			Emerge		
		Rating	% of Rating	Limiting Factor	Rating	% of Rating	
13.6	-	45	30%	S/S Xfmr Limit	49	28%	
9.1	22.7	45	50%	S/S Xfmr Limit	49	46%	
9.1	-	45	20%	S/S Xfmr Limit	54	17%	
13.6	22.7	45	50%	S/S Xfmr Limit	54	42%	

Figure 4: 32P3 Load Sheet

Project Load Summary

Project Number:

Project Name:

[redacted]

Circuit	S/S Bus	Zone Tie	Zones Being Picked Up	Zone Load (Amps)	Contingency Loading (Amps)	Normal			Emergency		
						Rating	% of Rating	Limiting Factor	Rating	% of Rating	
[redacted]				275	-	520	53%	750 kcmil AL UG	614	45%	
				51	326	520	63%	750 kcmil AL UG	614	53%	
				40	353	520	68%	750 kcmil AL UG	614	57%	
				38							
				242	-	520	47%	750 kcmil AL UG	614	39%	
				51	293	520	56%	750 kcmil AL UG	614	48%	
				40	320	520	62%	750 kcmil AL UG	614	52%	
				38							
				201	-	505	40%	4/0 Bare CU	605	33%	
				51	252	505	50%	4/0 Bare CU	605	42%	
				40	241	505	48%	4/0 Bare CU	605	40%	
				175	-	328	53%	250 kVA Regulators	440	40%	
				51	226	328	69%	250 kVA Regulators	440	51%	
				40	215	328	66%	250 kVA Regulators	440	49%	
				93	-	190	49%	#2 ACSR Bare	225	41%	
				51	144	190	76%	#2 ACSR Bare	225	64%	
				32	-	190	17%	#2 ACSR Bare	225	14%	
				51	83	190	44%	#2 ACSR Bare	225	37%	
				Xfmr Load (MVA)	Contingency Loading (MVA)	Normal			Em		
						Rating	% of Rating	Limiting Factor	Rating	% of Rating	
				9.1	-	45	20%	S/S Xfmr Limit	54	17%	
				13.6	22.7	45	50%	S/S Xfmr Limit	54	42%	
				13.6	-	45	30%	S/S Xfmr Limit	49	28%	
				9.1	22.7	45	50%	S/S Xfmr Limit	49	46%	

Figure 5: [redacted] Load Sheet

Attachment - C: Load Sheets

Project Load Summary

Project Number:
Project Name: [redacted]

Circuit	S/S Bus	Zone Tie	Zones Being Picked Up	Zone Load (Amps)	Contingency Loading (Amps)	Normal			Emergency		
						Rating	% of Rating	Limiting Factor	Rating	% of Rating	Limiting Factor
[redacted]				249	-	428	58%	1000 kcmil AL UG	606	41%	[redacted]
				115	364	428	85%	1000 kcmil AL UG	606	60%	
				130	379	428	89%	1000 kcmil AL UG	606	63%	
				56	380	428	89%	1000 kcmil AL UG	606	63%	
				75							
				113	362	428	85%	1000 kcmil AL UG	606	60%	
				168	-	440	38%	336 AL s/c	520	32%	
				56	299	440	68%	336 AL s/c	520	58%	
				75							
				113	281	440	64%	336 AL s/c	520	54%	
				79	-	460	17%	336 AL TW	520	15%	
				56	210	460	46%	336 AL TW	520	40%	
				75							
				113	192	460	42%	336 AL TW	520	37%	
				40	-	540	7%	336 ACSR Bare	645	6%	
				75	115	540	21%	336 ACSR Bare	645	18%	
				113	153	540	28%	336 ACSR Bare	645	24%	
				12	-	220	5%	1/0 ACSR TW	245	5%	
				130	142	220	65%	1/0 ACSR TW	245	58%	

Xfmr Load (MVA)	Contingency Loading (MVA)	Normal			Emerg	
		Rating	% of Rating	Limiting Factor	Rating	% of Rating
19.2	-	45	43%	S/S Xfmr Limit	54	36%
25.1	44.3	45	98%	S/S Xfmr Limit	54	82%
25.1	-	45	56%	S/S Xfmr Limit	54	46%
19.2	44.3	45	98%	S/S Xfmr Limit	54	82%

Figure 6: [redacted] Load Sheet

Project Load Summary

Project Number:
Project Name: [redacted]

Circuit	S/S Bus	Zone Tie	Zones Being Picked Up	Zone Load (Amps)	Contingency loading (Amps)	Normal			Emergency		
						Rating	% of Rating	Limiting Factor	Rating	% of Rating	
[redacted]				158	-	375	42%	2/0 Bare CU	450	35%	[redacted]
				87	245	375	65%	2/0 Bare CU	450	54%	
				126	284	375	76%	2/0 Bare CU	450	63%	
				158	-	375	42%	2/0 Bare CU	450	35%	
				87	245	375	65%	2/0 Bare CU	450	54%	
				126	284	375	76%	2/0 Bare CU	450	63%	
				88	-	440	20%	336 AL s/c	520	17%	
				87	175	440	40%	336 AL s/c	520	34%	
				126	214	440	49%	336 AL s/c	520	41%	
				52	-	440	12%	336 AL s/c	520	10%	
				87	139	440	32%	336 AL s/c	520	27%	
				126	178	440	40%	336 AL s/c	520	34%	

Xfmr Load (MVA)	Contingency Loading (MVA)	Normal			Emerg	
		Rating	% of Rating	Limiting Factor	Rating	% of Rating
25.1	-	45	56%	S/S Xfmr Limit	54	46%
19.2	44.3	45	98%	S/S Xfmr Limit	54	82%
19.2	-	45	43%	S/S Xfmr Limit	54	36%
25.1	44.3	45	98%	S/S Xfmr Limit	54	82%

Figure 7: [redacted] Load Sheet

EVERSOURCE
Project Approval Form

Attachment - D: Initial Funding PAF

Project Title: [redacted] **ROW Removal**	**Project Number: CD02211**
Date Prepared: 08/24/2023	**Company:** Eversource CT
Organization: Distribution Engineering	**Class(es) of Plant:** D Line
Project Initiator: [redacted]	**Project Category:** OBSOLETE PLANT OVERHEAD LINES
Project Manager: [redacted]	**Project Type:** OBSOLETE PLANT OVERHEAD LINES
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

The [redacted] and [redacted] are obsolete and deenergized ROWs in Stonington, CT. These ROWs are hazardous assets that have resulted in customer complaints and have warranted repairs to inoperative circuits. Drone inspections in 2021 revealed a high number of priority poles, ranging from rotted pole tops to cracked crossarms. Age of infrastructure is approximately 1965. These issues need to be addressed.

Title: [redacted] **Removal**
Division: Eastern
District: New London AWC
Town(s): Stonington

2. Project Objectives

This project is a further development of Project 103663 '[redacted]ROW REMOVAL". This new project was created due to the age of original project (2010) and an increase in the scope of work. The objective of this project is to remove the remaining poles and conductor from the [redacted] and [redacted] ROWs while maintaining rights in these areas. These ROWs have been out of service for 10+ years and have a combined span of 6.3 miles. The initial requested amount is $30,000.

Project Initiator: [redacted]_____

Engineering Approval: _____

Attachment - E: Project Authorization Checklist

Project Authorization Checklist

Project Initiator: [redacted]_____

Project #: _____**CD02211**_____

Project Title: [redacted] **ROW Removal**____

Funding Type:

☒ Partial PAF ☐ Full PAF

Project Alternatives:

☒ Options considered ☒ Explanation why alternatives were not selected

☒ NWA considered ☒ Explanation why preferred option was selected

Project Requirements (Review all, and check all that apply):

☐ Easement

☒ Trimming
☒ Estimate Received

☒ Environmental Review Initiated

☐ Pole permits (state roads)

☐ P&C Settings

☐ Synergi load flow

☐ TD007

☒ ROW trimming
☒ Estimate Received

☐ Review with Operations

☐ Underground permits

☐ Material long lead

PAF Documents Attached:

☒ One Lines ☒ Geographical Map ☒ Load Projections ☒ Estimates

☐ Other Documents (List):

PAF Review Complete:

☐ Lead Reviewed by: _____ Date: _____

☐ Manager Reviewed by: _____ Date: _____