EVERSOURCE

Project Approval Form

Project Title: Middle River [redacted]	Project Number: CD02190
Date Prepared: 03/20/2025	**Company:** Eversource CT
Organization: Distribution Engineering	**Project Category:** OVERLOADS-SPECIFIC PROJECTS
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: 12/31/2025	**NWS Excludable:** ☐ Yes ☒ No
Total Capital Request: 5,732.1 k	**Authorization Type:** Full Funding

1. Executive Summary

Full funding is being requested for this project at a cost of $5,732.1k which is 156% of the partial funding estimate of $3,673.4k. The variance between the full funding and partial funding estimate is primarily due to the following additional expenses. An estimated additional $400k for unforeseen costs associated with the new duct bank crossing the river. The river crossing needed custom designs to span a farther distance than originally expected. The initial tree work estimates only accounted for about $75k, an additional $350k was needed to trim the area being converted from single phase to three phase backbone and the area around the UG work. Manhole inspection costs were also not included in the original estimate adding an additional $40k. An additional 500’ of 1000 CU cable will also be required for the UG cable, increasing the estimate by $80k. The associated indirects have also increased causing a further overage on the cost of the project.

[redacted]

- Division: Western
- District: Newtown AWC
- City/Town(s): Danbury

2. Project Cost Summary

Note: Dollar values are in thousands.

Capital Costs	Year 2025	Year 2026	Year 2027+	Total
Direct Capital Costs				
Internal Labor and Construction Equipment	212.4	0.0	0.0	212.4
Outside Services	1,483.4	0.0	0.0	1,483.4
Materials	607.2	0.0	0.0	607.2
Removals	169.5	0.0	0.0	169.5
Risk and Contingency	399.9	0.0	0.0	399.9
Other	0.0	0.0	0.0	0.0
Subtotal – Direct Costs	**2,872.4**	**0.0**	**0.0**	**2,872.4**
Indirect Capital Costs				
Indirect/Overheads (including benefits)	2,859.7	0.0	0.0	2,859.7
Capitalized interest or AFUDC, if any	0.0	0.0	0.0	0.0
Subtotal – Indirect Costs	**2,859.7**	**0.0**	**0.0**	**2,859.7**
Total Gross Capital Costs	**5,732.1**	**0.0**	**0.0**	**5,732.1**
Customer Contribution	**0.0**	**0.0**	**0.0**	**0.0**
Total Net Capital Project Costs	**5,732.1**	**0.0**	**0.0**	**5,732.1**

Explain unique payment provisions, if applicable:

3. Technical Justification

Background, Project Need/Justification, and Project Scope

a. Background

[redacted]

b. Project Need

[redacted]

c. Project Scope

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

[redacted]

Major Material:

- 2 Viper with 651R Controls
- 2 900A In-line Disc Switch
- 1 900 A GOAB
- 5,000' 1000 Cu EPR (3Ø)
- 15,000' 477 AL TW (1Ø)
- 3 Manhole 6'x14'x7' – 9-ton SC 566644
- 1,000' 12-6" Duct bank
- 1 3Ø Riser Pole

4. Alternatives Considered

Project Option Comparison

[redacted]

Authorization Type	Full	Partial	Partial	Partial
Capital Cost	$5,732.1k	$5,941.2k	$6,237.3k	$27,153.1k
Expense Cost	$178.8k	$185.3k	$194.5k	$846.9k
Total Cost	$5,910.5k	$6,126.5k	$6,431.8k	$28,000k
Total Cost / MVA added	$314.3/MVA	$10,675.5k/MVA	$1,529.0k/MVA	$2,000k/MVA
Total Cost / CM Saved	$2.39/CM	$4.37/CM	$4.43/CM	N/A
Total Cost / CI Saved	$11,240.20/CI	$17,029.14/CI	$17,097.75/CI	N/A
Preferred option	X			

Option Summary

Preferred:

Option 1 – New Feeder

This option proposes to

Other options:

Option 2 – Increase rating on

This option focuses on

The cost of the option is $6,126.5k which is $2,338.5k higher than the preferred work.

Reasons this option was not selected are as follows:

Option 3 – Increase rating on [redacted]

This option consists of option 2 which [redacted]

The cost of the option is $6,431.5k which is $2,643.8k higher than the preferred work.

Reasons this option was not selected are as follows:

- [redacted]
- [redacted]

Non-Wire Solution (NWS)

[redacted] The NWS has an estimated cost of $28M*.

This solution was not selected for the following:

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

*NWA estimate was calculated at $2M per MWh based on the two lowest of three contractor bids received in Connecticut.

5. Project Schedule

Add any additional milestones that are pertinent to the project

Milestone/Phase Name	Estimated Date
Partial Approval	Jun 2023
100% Detailed Engineering Completion	July 2024
Fully Funded	Mar 2025
Construction Start	April 2025
In Service Date	Dec 2025

6. Regulatory Decisions

N/A

7. Codes and Standards

N/A

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.	2025	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	2025	Low	Design to minimize customer impact. Project Preplanning and customer/community outreach.
Internal construction resources not available to perform the work.	2025	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.	2025	Medium	Plan internal resources to perform the work. Use competitive bidding to ensure lowest outside labor cost.
Materials Shortage or long lead times	2025	Medium	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.

Technological risks involving integration of new technology	2025	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	2025	Low	Use of mats and specialty equipment, only work during certain times of the year.

9. References

References
1. CS000571 – [redacted] New Feeder Project – (needs EPAC approval – March 08, 2023, update)
2.
3.
4.
5.

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

Attachment	Included in Submittal?
A. Partial PAF	YES
B.	
C.	
D.	
E.	
F.	

Attachment A - Partial PAF

Project Title: Middle River [redacted]	**Project Number:** CD02190
Date Prepared: 05/16/2023	**Company:** Eversource CT
Organization: Distribution Engineering	**Project Category:** OVERLOADS-SPECIFIC PROJECTS
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: $3,673.4k	**Authorization Type:** Partial Funding

1. Executive Summary

[redacted]

Preferred option 1 ~ $3,673.4k

2. Project Cost Summary

Note: Dollar values are in thousands.

Capital Costs	Year 2025	Year 2026	Year 2027+	Total
Direct Capital Costs				
Internal Labor and Construction Equipment	153.8	0.0	0.0	153.8
Outside Services	1,250.3	0.0	0.0	1,250.3
Materials	627.2	0.0	0.0	627.2
Removals	277.6	0.0	0.0	277.6
Risk and Contingency	24.3	0.0	0.0	24.3
Other	0.0	0.0	0.0	0.0
Subtotal – Direct Costs	**2,333.3**	**0.0**	**0.0**	**2,333.3**
Indirect Capital Costs				
Indirect/Overheads (including benefits)	1,256.8	0.0	0.0	1,256.8
Capitalized interest or AFUDC, if any	83.3	0.0	0.0	83.3
Subtotal – Indirect Costs	**1,340.1**	**0.0**	**0.0**	**1,340.1**
Total Gross Capital Costs	**3,673.4**	**0.0**	**0.0**	**3,673.4**
Customer Contribution	**$0**	**$0**	**$0**	**$0**
Total Net Capital Project Costs	**3,673.4**	**0.0**	**0.0**	**3,673.4**

3. Technical Justification

Background, Project Need/Justification, and Project Scope

a. Background

[redacted]

b. Project Need

[redacted]

c. Project Scope

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

[redacted]

[redacted]

Major Material:

- 2 Viper with 651R Controls
- 2 900A In-line Disc Switch
- 1 900 A GOAB
- 5,000' 1000 Cu EPR (3Ø)
- 15,000' 477 AL TW (1Ø)
- 3 Manhole 6'x14'x7' – 9-ton SC 566644
- 1,000' 12-6" Duct bank
- 1 3Ø Riser Pole

4. Alternatives Considered

Option 2 – Increase rating on 28M3.

This option is an alternative of [redacted]

[redacted]

The cost of the option is $6,126.5k which is $2,338.5k higher than the preferred work.

Reasons this option was not selected are as follows:

- [redacted]

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

Option 3 – [redacted]

This option consists of option 2 [redacted]

The cost of the option is $6,431.5k which is $2,643.8k higher than the preferred work.

Reasons this option was not selected are as follows:

- [redacted]
- [redacted]

Project Option Comparison

	Options		
[redacted]			
Cost	$3,788k	$6,126.5k	$6,431.8k
Cost / MVA added	$201.4/MVA	$10,675.5k/MVA	$1,529.0k/MVA
Cost / CM Saved	$1.53/CM	$4.37/CM	$4.43/CM
Cost / CI Saved	$7,203.24/CI	$17,029.14/CI	$17,097.75/CI
Preferred option	X		

5. Project Schedule

Add any additional milestones that are pertinent to the project

Milestone/Phase Name	Estimated Date
Preliminary Approval (ENG)	Jun 2023
Detail Design	July 2024
Construction Start	Jan 2025
Testing/Commissioning	Sept 2025
In Service Date	Dec 2025

6. Regulatory Decisions

N/A

7. Codes and Standards

N/A

8. Risk and Contingencies

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.
Customer Permission / Siting Council / Municipal approvals	2024	Low	Design to minimize customer impact. Project Preplanning and customer/community outreach.
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Wetlands / Environmentally sensitive area	2025	Low	Use of mats and specialty equipment, only work during certain times of the year.

9. References

References
1. CS000571 - [redacted] New Feeder Project – (needs EPAC approval – March 08, 2023, update)

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

Attachment	Included in Submittal?
A. Cost Estimate	*YES*
B. Geographic Map	*YES*
C. One Line	*YES*
D. Duct Layout	*YES*
E. Load Summary	*YES*
F.	

A. Cost Estimate

Work Classification

Category: Line

Type: BLG1

Type Desc: OVERLOADS-SPECIFIC PROJECTS

Work Type:

Ownership / Management

AWC: Newtown

Statewide: No

Owner: [redacted]

Manager:

Project Information

Status: Draft

SPS #:

AIS Score:

Associated Projects:

Assignment ID:

Patrol Find ID:

Budget Summary - Preferred Option

New Circuit with sectionalizing

2025

ID	Title	Status	Rev #	Contingency	Expenditure Amount	Net Estimate
1	[redacted] Getaway cable and OH sec	Draft	0	28%	$3,787,999	$3,787,999
				2025 Total:	**$3,787,999**	**$3,787,999**
				Total Project:	**$3,787,999**	**$3,787,999**

A. Cost Estimate (Cont.)

Estimate

Preliminary Estimate Summary	
Revision Number:	0
Contingency:	28.00%
SubTotal:	$2,959,374
Contingency Amount:	$828,625
Estimate:	$3,787,999
Reimbursement:	$0
Net Amount:	**$3,787,999**

Description:

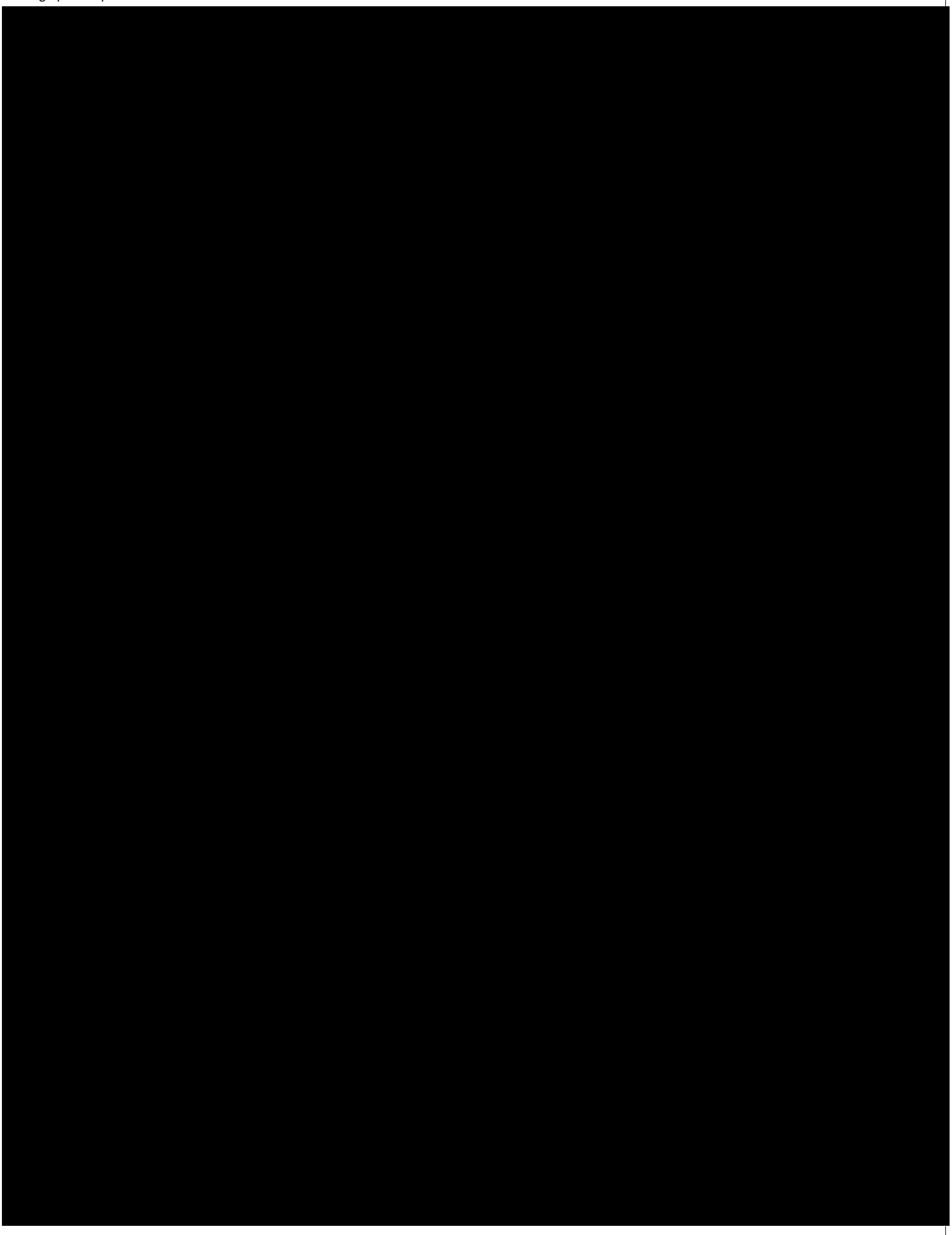
Item Description	CU	Amount
SWITCHING OH/DB/UG - SWITCHING NonNetwork - Average	16-ALL17	$7,019.20
TRAFFIC OH/DB/UG - Traffic Control - Police Officer	16-ALL18	$35,000.00
TREE OH - Tree Trimming $60,000/ mile	23-OH61	$78,000.00
SECTIONALIZE OH - Recloser - 3ph [redacted]	16-OH38	$95,979.20
SECTIONALIZE OH-Vertical Disconnect Switches-600/900 amp 3-1ph [redacted]	16-OH43	$20,566.40
OTHER OTHER 30% Contractor Cost added	16-ALL14	$682,933.00
OTHER OTHER 30% cost adjustments added	16-ALL14	$492,936.00
OH WIRE OH - Line Extension - 3ph (556 kcmil) From new riser to pole 5945	16-OH34	$600,000.00
CONDUIT UG-Ductline-up to 12 duct-Non- Traveled/Non-Paved new breaker [redacted] to MH#253	16-UG138	$188,800.00

[redacted]

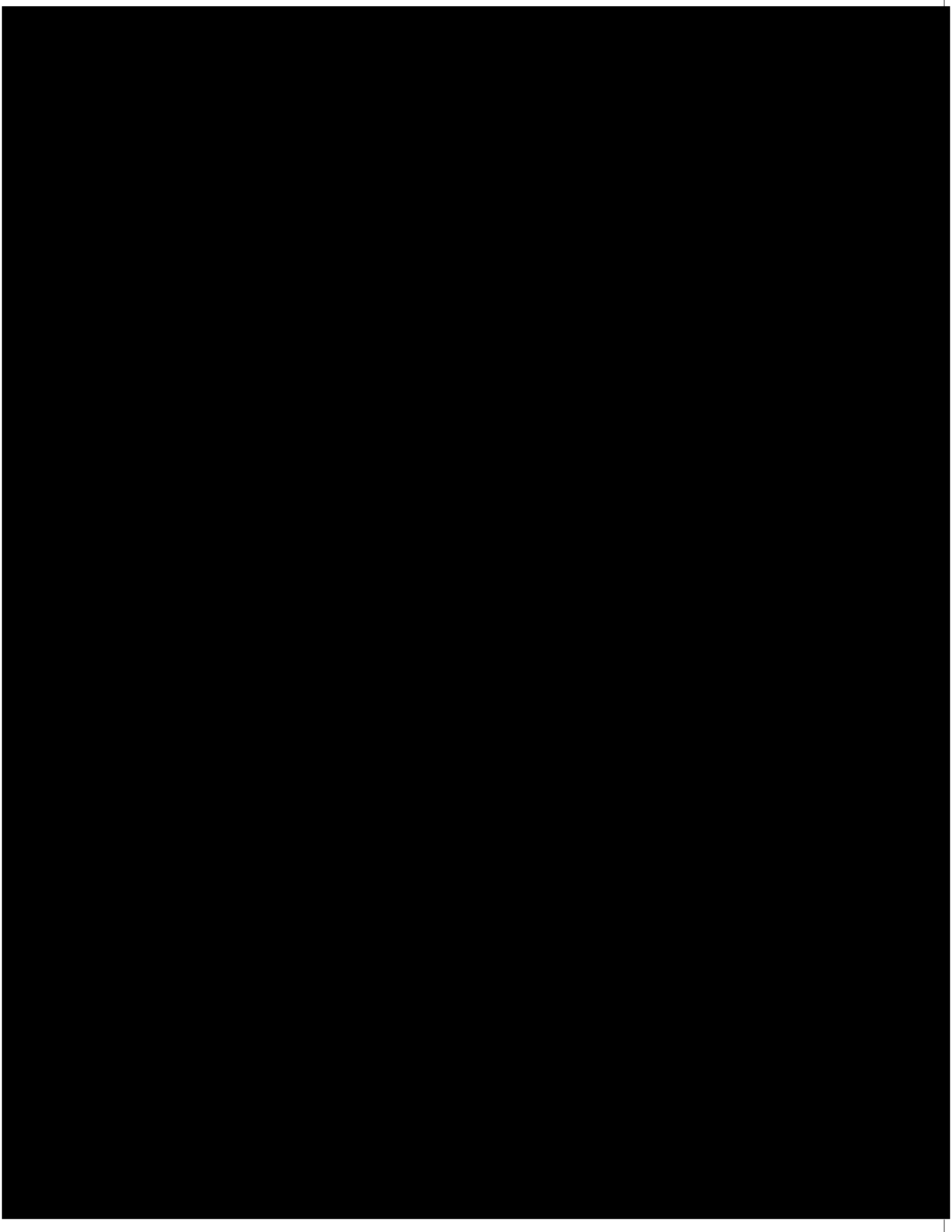
A. Cost Estimate (Cont.)

UG CABLE DB/UG - 750/1000 - 3-1/C (3ph) Cu new breaker [redacted] to MH#261	16-UG114B	[redacted]	480,000.00
ENCLOSURE UG - MANHOLE - Precast New MH 179	16-UG139		188,959.20
OH WIRE OH - Remove circuit wire (3 phase) Remove existing cables from From new riser to pole 5945	16-OH37A		$16,000.00
POLE DB/UG - Riser - 3ph Riser near Devonshire Dr	16-UG146		$10,794.40
SECTIONALIZE OH - Recloser - 3ph Viper switch on pole 5945	23-OH38		$62,386.48

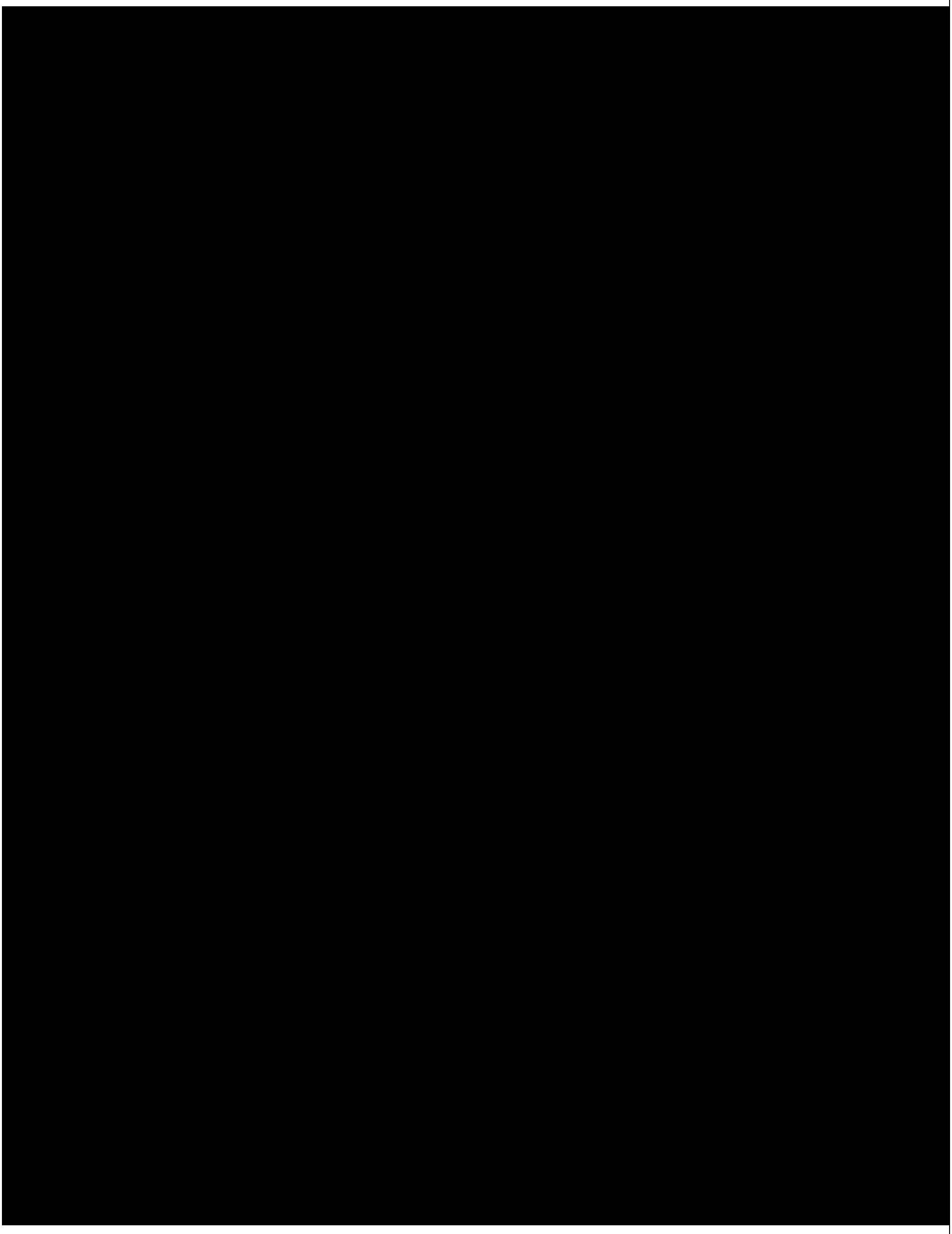
B. Geographic Map



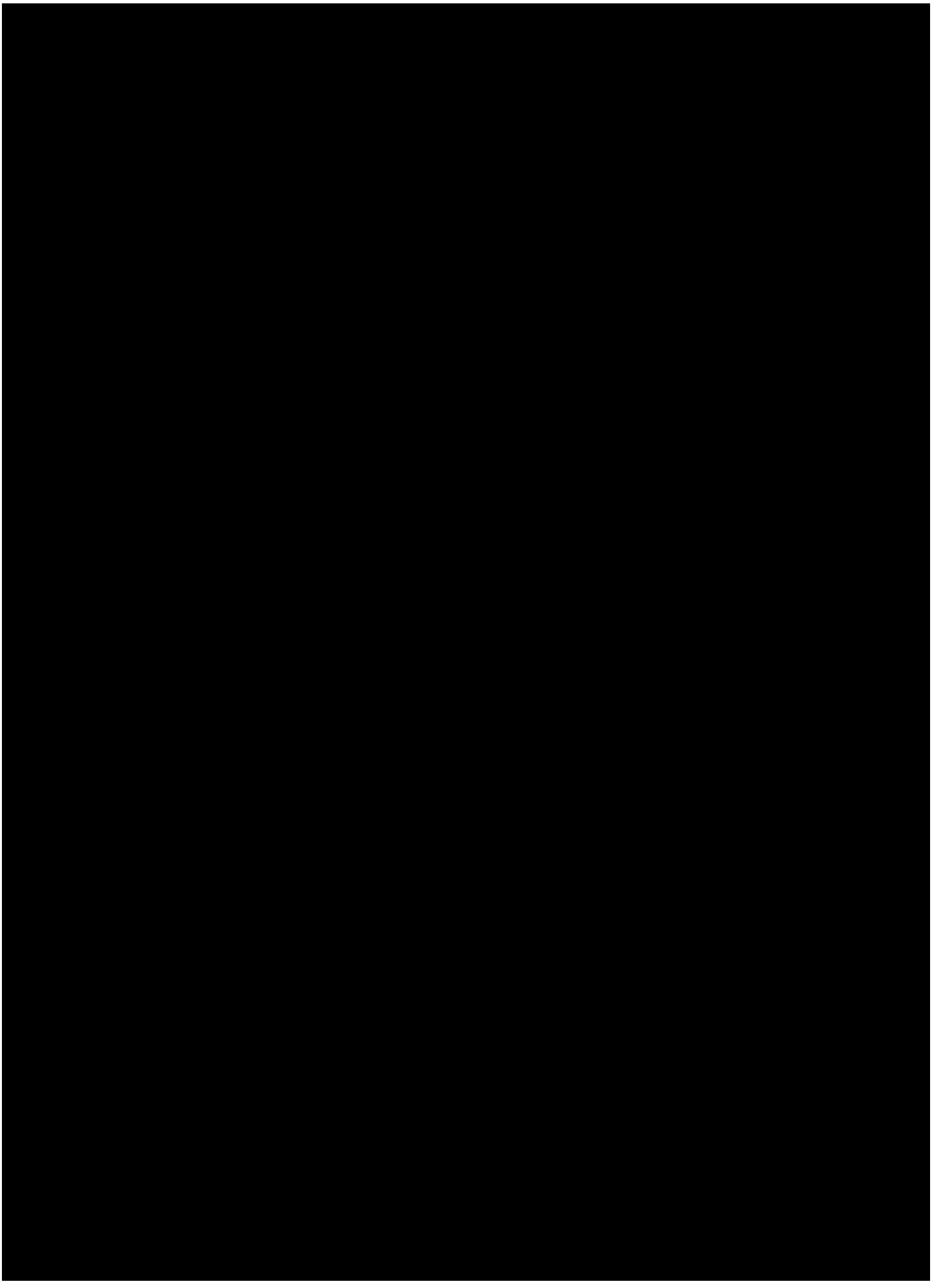
B. Geographic Map (Cont.)



B. Geographic Map (Cont.)



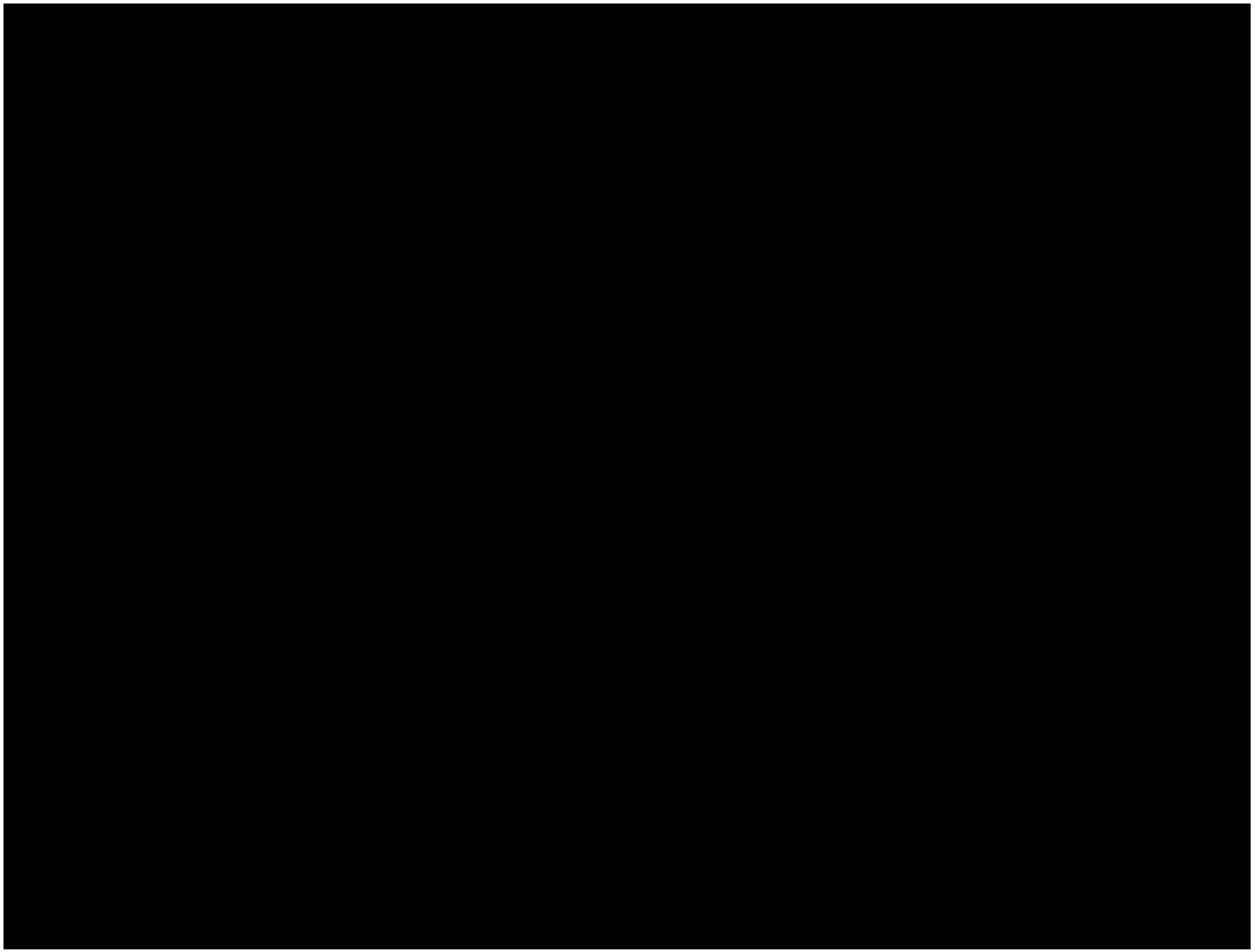
B. Geographic Map (Cont.)



C. One Line



C. One Line (Cont.)



C. One Line (Cont.)



C. One Line (Cont.)



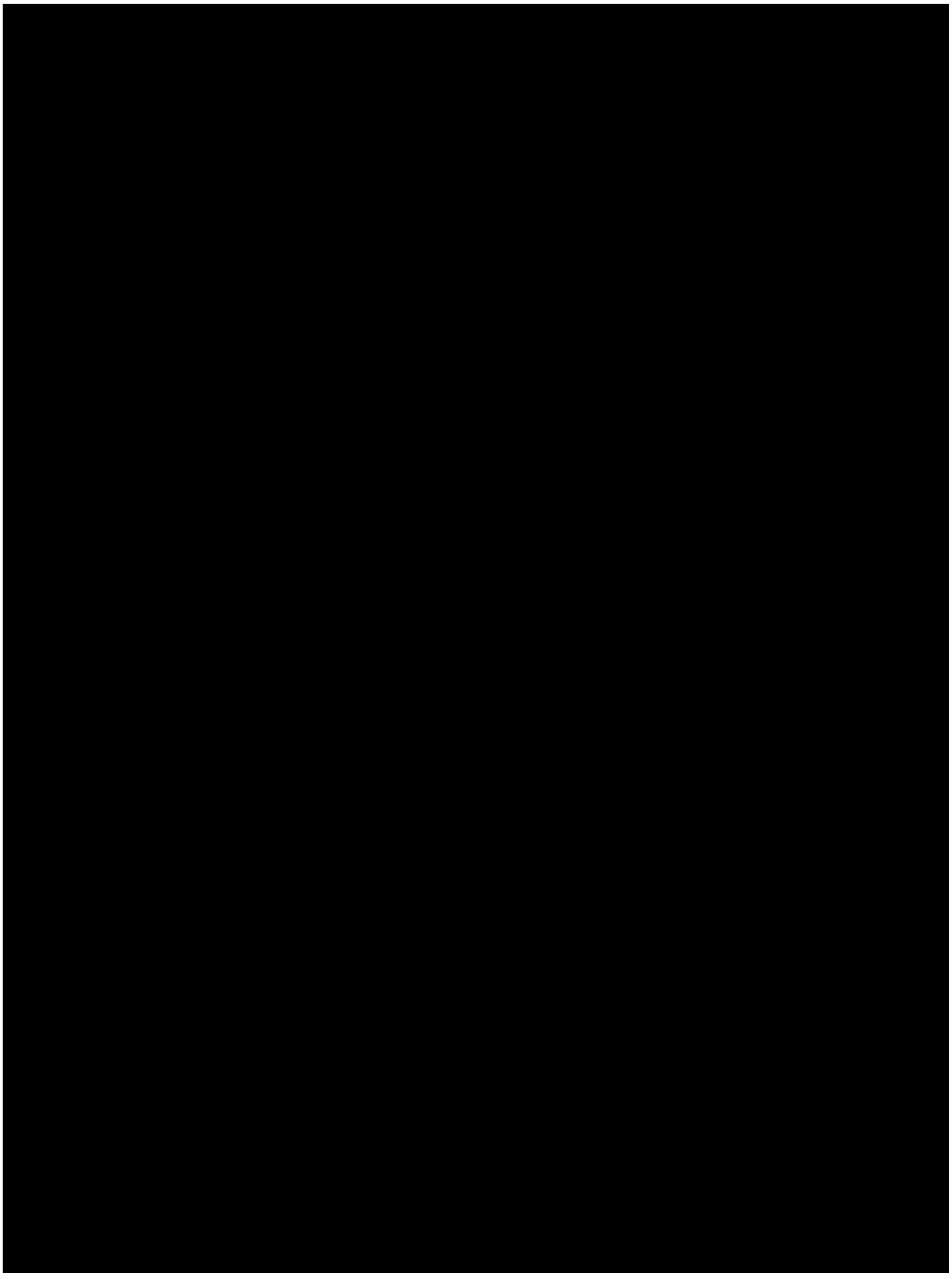
D. Duct Layout



D. Duct Layout (Cont.)



D. Duct Layout (Cont.)



D. Duct Layout (Cont.)



[redacted]



E. Load Summary (Cont.)

[redacted]

E. Load Summary (Cont.)

[redacted]

E. Load Summary (Cont.)

[redacted]

Project Title: [redacted] Load Relief via [redacted]	**Project Number:** CD02190
Date Prepared: 05/01/2023	**Company:** Eversource CT
Organization: Distribution Engineering	**Class(es) of Plant:** D Line
Project Initiator: [redacted]	**Project Category:** OVERLOAD SPEC PROJ GREENWICH
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

This project has been established to resolve overload issues during summer peak, improve critically low voltage issues, and increase feeder capacity to support load growth.

- Project Location:
  - Western Division
  - Newtown AWC
  - Danbury, CT

2. Project Objectives

This project is being presented to request initial funding of $30K to provide engineering support, perform field inspections and develop designs.

Project Approval Form

Project Initiator: _____

Engineering Approval: _____