EVERSOURCE

Project Approval Form

Project Title: CDOT Flanders Rd Relocation	Project Number: CD02031
Date Prepared: 09/28/2023	**Company:** Eversource CT
Organization: Distribution Engineering	**Project Category:** Line Relocations/Act of Public Authority
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: 6/30/24	
Total Capital Request: $1,899.2K (100% reimbursable)	**Authorization Type:** Full Funding

1. Executive Summary

The Connecticut Department of Transportation (CDOT) has contacted Eversource concerning CDOT Project 44-156 Flanders Rd, East Lyme, road improvements. This project affects Eversource facilities on Flanders Rd and overhead facilities crossing I-95 by on-ramp 75 in East Lyme, CT.

The CDOT scope for this project includes widening Flanders Road (Route 161) to provide extra lanes heading north and south, changing the traffic pattern for southbound exit 74 on and off ramps, and lane widening on I-95 southbound exit 75 on ramp. [redacted]

This project is State funded under all other municipal projects and is 100% reimbursable.

9/20/23 – Full Funding request. The Partial Funding estimate is $1,702K, approved on 6/30/22. Full Funding estimate is $1,899K, a difference of $197K, or a 12% increase. There is no scope change. The project is 100% reimbursable. The project will be constructed using contractor crews for all overhead work and Eversource crews for underground work. Project expected ISD is 6/30/24.

2. Project Cost Summary

Note: Dollar values are in thousands.

Capital Costs	Year 2023	Year 2024	Year 2025	Total
Direct Capital Costs				
Internal Labor and Construction Equipment	17.8	99.7	0.0	117.5
Outside Services	105.7	592.6	0.0	698.3
Materials	22.9	128.5	0.0	151.4
Removals	13.7	76.8	0.0	90.5
Risk and Contingency	20.1	112.4	0.0	132.5
Other	0.0	0.0	0.0	0.0
Subtotal – Direct Costs	**180.1**	**1,010.0**	**0.0**	**1,190.1**
Indirect Capital Costs				
Indirect/Overheads (including benefits)	107.3	601.7	0.0	709.0
Capitalized interest or AFUDC, if any	0.0	0.0	0.0	0.0
Subtotal – Indirect Costs	**107.3**	**601.7**	**0.0**	**709.0**
Total Gross Capital Costs	**287.4**	**1,611.8**	**0.0**	**1,899.2**
Customer Contribution	**-287.4**	**-1,611.8**	**0.0**	**-1,899.2**
Total Net Capital Project Costs	**0.0**	**0.0**	**0.0**	**0.0**

This project is 100% reimbursable subject to the State of CT's approval of costs.

3. Technical Justification

Background, Project Need/Justification, and Project Scope

a. Background

State DOT is requesting Eversource to relocate facilities in conflict with CDOT Project 44-156.

b. Project Need

The CT Department of Transportation has proposed improvements on Flanders Road (Route 161) in the area of the Flanders 11Y substation and on I-95 by southbound exit 75 on ramp [redacted]

The objective of this project is to remove the facilities that conflict with the Flanders Road and I-95 highway widening and install new facilities aligning with the new roadway.

c. Project Scope

The proposed project scope is as follows:

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



4. Alternatives Considered

This is a Connecticut Department of Transportation highway relocation project and there are no alternatives.

5. Project Schedule

Add any additional milestones that are pertinent to the project.

Milestone/Phase Name	Estimated Date
Partial Approval	6/30/22
100% Detailed Engineering Completion	12/31/22
Fully Funded	9/28/23
Construction Start	5/1/23
In Service Date	6/30/24

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	High	Pre-order long lead time material; minimize the use of non-standard and non-stocked material.
Storm delays	2023	Medium	If storm activity delays work, we may be forced to use external resources.
System abnormal configuration	2023	Medium	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. Overall Circuit Map of Project Area	*YES*
C. Overall Project maps	*YES*
D. State Highway maps	*YES*

Attachment A

Relocate OH facilities crossing I-95.

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Specific Project Proposal - Project #: CD02031
CT DOT 44-156 Flanders Rd Relocation

Design Alternative CD02031-01

Estimate

Preliminary Estimate Summary

Revision Number:	0
Contingency:	24.00%
SubTotal:	$122,711
Contingency Amount:	$29,451
Estimate:	$152,162
Reimbursement:	$0
Net Amount:	**$152,162**

Description:

Item Description	CU	Amount
POLE OH - POLE - 3ph (CL&P custodian)	16-OH14	$9,352.00
POLE OH - Install/Replace Anchor and Guy	16-OH14B	$7,251.20
SECTIONALIZE OH - Cutouts or Arresters - 1ph	16-OH19	$1,371.20
SECTIONALIZE OH-Vertical Disconnect Switches-600/900 amp 3-1ph	16-OH43	$10,283.20
XF OH - OH XF - 1ph	16-OH45	$2,109.60
UG CABLE DB - Aluminum Secondary in Conduit	16-UG116	$1,024.00
UG CABLE UG - Cable Removal - all cables	16-UG117	$800.00
TRAFFIC OH/DB/UG - Traffic Control - Police Officer shutting down I-95 to shift OH facilites Crossing I-95 by south bound	16-ALL18	$35,000.00
OH WIRE OH-Reconductor w/175 Mil Tree Wire-3ph- 556 kcmil New OH line crossing I-95	16-OH27	$27,160.00

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Specific Project Proposal - Project #: CD02031

CT DOT 44-156 Flanders Rd Relocation

Design Alternative			CD02031-01
OH WIRE	16-OH31	[redacted]	$2,240.00
OH - Neutral New OH line crossing I-95			
OTHER	16-ALL14		$25,000.00
OTHER Removal of 11Y6-120			
OH WIRE	16-OH37A		$1,120.00
OH - Remove circuit wire (3 phase) Removal of 336 TW crossing I-95 by south bound on ramop 75			

Associated / Impacted Devices

Status	Type / SysID	Street / Cross St	Structure / Town	Circuit	Map	Cust	Notes

Relocate [redacted] OH on road to Costco and install 11Y1 getaway cable.

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Specific Project Proposal - Project #: CD02031
CT DOT 44-156 Flanders Rd Relocation

Design Alternative CD02031-02

Estimate

Preliminary Estimate Summary

Revision Number:	0
Contingency:	24.00%
SubTotal:	$520,454
Contingency Amount:	$124,909
Estimate:	$645,362
Reimbursement:	$0
Net Amount:	**$645,362**
Description:	

Item Description	CU	[redacted]	Amount
POLE OH - POLE - 1ph (CL&P custodian)	16-OH13		$8,652.00
POLE OH - Install/Replace Anchor and Guy	16-OH14B		$13,184.00
SECTIONALIZE OH - Cutouts or Arresters - 1ph	16-OH19		$4,113.60
SECTIONALIZE OH - Cutouts or Arresters - 3ph	16-OH20		$2,315.20
POLE DB/UG - Riser - 3ph	16-UG146		$32,383.20
POLE OH - POLE - 3ph (CL&P custodian)	16-OH14		$23,380.00
OH WIRE OH-Reconductor w/175 Mil Tree Wire-3ph- 556 kcmil	16-OH27		$67,512.00
XF OH - OH XF - 1ph	16-OH45		$6,328.80
XF OH - OH XF's - bank of 3-1ph	16-OH46		$5,019.20

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Specific Project Proposal - Project #: CD02031

CT DOT 44-156 Flanders Rd Relocation

Design Alternative			CD02031-02
OH WIRE OH-Reconductor w/175 Mil Tree Wire-1ph (any gauge) 1/0 TW	16-OH25	[redacted]	$17,040.00
SECTIONALIZE OH - Cutouts or Arresters - 1ph 15K fuse for tap feeding cell tower	16-OH19		$1,371.20
OTHER OTHER 4/0 Neutral Ring Bus for MH #1, MH #4 , and MH #3	16-ALL14		$6,000.00
TRAFFIC OH/DB/UG - Traffic Control - Police Officer 5% of net total	16-ALL18		$31,000.00
UG CABLE UG - Cable Removal - all cables Cable removal form MH #9 to pole 6517	16-UG117		$3,200.00
OH WIRE OH - Neutral Costco Feed	16-OH31		$4,544.00
UG CABLE DB - Aluminum Secondary in Conduit Costco Service Feed and New Service feed for Cash Home Center	16-UG116		$2,048.00
CONDUIT UG-Ductline-up to 12 duct - Traveled Way / Paved Duct bank from MH #9 to pole 8325	16-UG137		$56,304.00
OTHER OTHER Neck extension for MH #3, MH#4, MH #9	16-ALL14		$6,000.00
OH WIRE OH - Neutral Neutral for new 556 Bare wire from substation to flanders bakery	16-OH31		$5,568.00
XF DB/UG - Padmount XF - 3ph Relocate Xfmr for Cash Home Center Inc. 150kVA Xfmr	16-UG131		$6,299.20
UG CABLE DB/UG - 750/1000 - 3-1/C (3ph) Cu Relocating [redacted] OH circuit to UG	16-UG114B		$72,000.00
DB CABLE DB/UG - #1 - 1/C (1ph) Al relocating Daddys Noodle feed	16-UG111		$6,912.00

[redacted] OH and UG relocation.

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Specific Project Proposal - Project #: CD02031
CT DOT 44-156 Flanders Rd Relocation

Design Alternative CD02031-03

Estimate

	Preliminary Estimate Summary
Revision Number:	0
Contingency:	24.00%
SubTotal:	$645,783
Contingency Amount:	$154,988
Estimate:	$800,771
Reimbursement:	$0
Net Amount:	**$800,771**

Description:

Item Description	CU	[redacted]	Amount
POLE OH - POLE - 3ph (Telephone custodian)	16-OH12		$56,960.00
POLE OH - Install/Replace Anchor and Guy	16-OH14B		$6,592.00
SECTIONALIZE OH - Cutouts or Arresters - 1ph	16-OH19		$2,742.40
SECTIONALIZE OH - Cutouts or Arresters - 3ph	16-OH20		$4,630.40
OH WIRE OH-Reconductor w/175 Mil Tree Wire-3ph- 336 kcmil	16-OH26b		$17,400.00
OH WIRE OH - Remove circuit wire (3 phase)	16-OH37A		$1,920.00
DB CABLE DB/UG - #1 - 3-1/C (3ph) Al	16-UG112		$6,080.00
UG CABLE UG - Cable Removal - all cables	16-UG117		$2,500.00
CONDUIT UG-Ductline-up to 12 duct - Traveled Way / Paved	16-UG137		$143,888.00

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Specific Project Proposal - Project #: CD02031

CT DOT 44-156 Flanders Rd Relocation

Design Alternative			CD02031-03
POLE DB/UG - Riser - 3ph	16-UG146	[redacted]	$75,560.80
UG CABLE UG - Cable Removal - all cables [redacted] UG cable removal	16-UG117		$16,200.00
SECTIONALIZE OH - Cutouts or Arresters - 3ph 15K fuse for Burger King service feed	16-OH20		$2,315.20
OTHER OTHER 4/0 neutral ring bus for MH #5 and MH #6	16-ALL14		$3,000.00
TRAFFIC OH/DB/UG - Traffic Control - Police Officer 5% of net total	16-ALL18		$37,000.00
SECTIONALIZE OH - Cutouts or Arresters - 1ph Futurer CT - DOT service	16-OH19		$1,371.20
OH WIRE OH - Reconductor w/ 175 Mil Tree Wire - 3ph -1/0 Futurer CT - DOT service	16-OH26a		$9,240.00
OH WIRE OH - Neutral Futurer CT - DOT service	16-OH31		$960.00
XF OH - OH XF's - bank of 3-1ph Futurer CT - DOT service	16-OH46		$5,019.20
UG CABLE DB - Aluminum Secondary in Conduit Futurer CT - DOT service	16-UG116		$2,560.00
POLE DB/UG - Riser - 3ph Futurer CT - DOT service	16-UG146		$10,794.40
OTHER OTHER Neck Extension for MH #5	16-ALL14		$2,000.00
UG CABLE DB/UG - 750/1000 - 3-1/C (3ph) Cu New [redacted] gateway cable	16-UG114B		$44,160.00

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Specific Project Proposal - Project #: CD02031

CT DOT 44-156 Flanders Rd Relocation

Design Alternative			CD02031-03
ENCLOSURE UG - MANHOLE - Precast New MH #6	16-UG139	[redacted]	$62,986.40
SECTIONALIZE OH - Remove Recloser (any) Relocation of [redacted]	16-OH42		$5,656.00
SECTIONALIZE OH - Recloser - 3ph Relocation of [redacted] to new pole	16-OH38		$47,989.60
UG CABLE UG - Cable Removal - all cables Removal of UG cable between MH #5 AND MH #8 on King Arthur Dr	16-UG117		$20,000.00
XF OH - OH XF's - bank of 3-1ph Replace 3 phase Xfmr 10 kVA and 25 kVA	16-OH46		$10,038.40
OTHER OTHER Second trip for MH #5 neck extension	16-ALL14		$2,000.00
OTHER OTHER Switching	16-ALL14		$38,000.00
OTHER OTHER Third trip for MH #5 neck extension	16-ALL14		$2,000.00
XF OH - OH XF - 1ph Two 50 kVA Xfmr	16-OH45		$4,219.20

Associated / Impacted Devices

Status	Type / SysID	Street / Cross St	Structure / Town	Circuit	Map	Cust	Notes

Relocate all OH facilities on access road to DOT.

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Specific Project Proposal - Project #: CD02031
CT DOT 44-156 Flanders Rd Relocation

Design Alternative CD02031-04

Estimate

Preliminary Estimate Summary

Revision Number:	0
Contingency:	24.00%
SubTotal:	$93,332
Contingency Amount:	$22,400
Estimate:	$115,732
Reimbursement:	$0
Net Amount:	**$115,732**

Description:

Item Description	CU	[redacted]	Amount
POLE OH - POLE - 1ph (CL&P custodian)	16-OH13		$2,884.00
POLE OH - Install/Replace Anchor and Guy	16-OH14B		$3,955.20
SECTIONALIZE OH - Cutouts or Arresters - 1ph	16-OH19		$2,742.40
OH WIRE OH - Neutral	16-OH31		$14,080.00
OH WIRE OH - Remove circuit wire (1 phase)	16-OH37		$5,280.00
XF OH - OH XF - 1ph	16-OH45		$4,219.20
OH WIRE OH-Reconductor w/175 Mil Tree Wire-1ph (any gauge) 1/0 TW	16-OH25		$52,800.00
SECTIONALIZE OH - Cutouts or Arresters - 1ph 15K fuse to be install at the beginning of side tap.	16-OH19		$1,371.20
TRAFFIC OH/DB/UG - Traffic Control - Police Officer 5% of net total	16-ALL18		$6,000.00

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Substation work to install [redacted] UG getaway.

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Specific Project Proposal - Project #: CD02031

CT DOT 44-156 Flanders Rd Relocation

Design Alternative CD02031-05

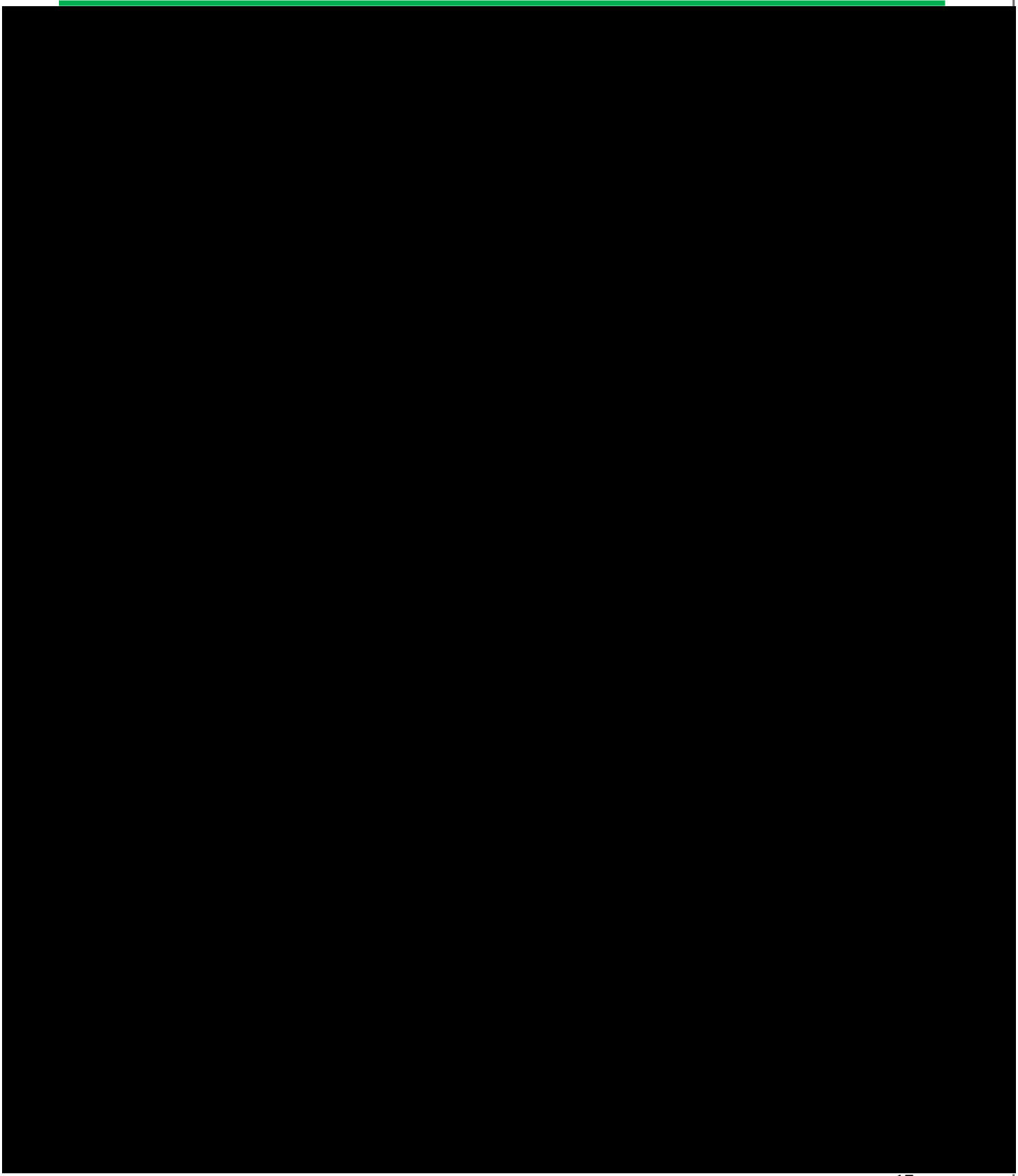
Estimate

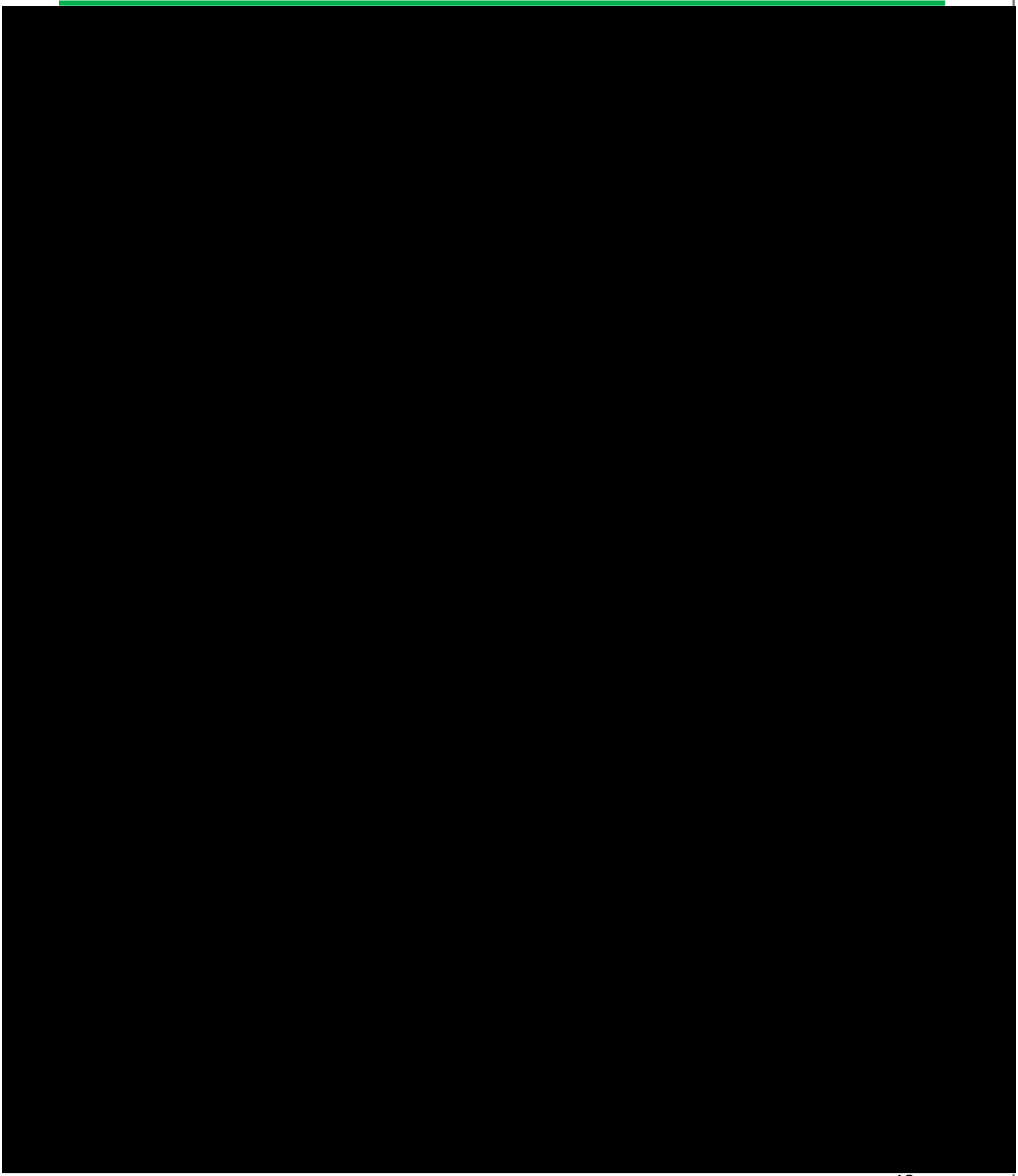
	Preliminary Estimate Summary
Revision Number:	0
Contingency:	24.00%
SubTotal:	$55,000
Contingency Amount:	$13,200
Estimate:	$68,200
Reimbursement:	$0
Net Amount:	**$68,200**
Description:	

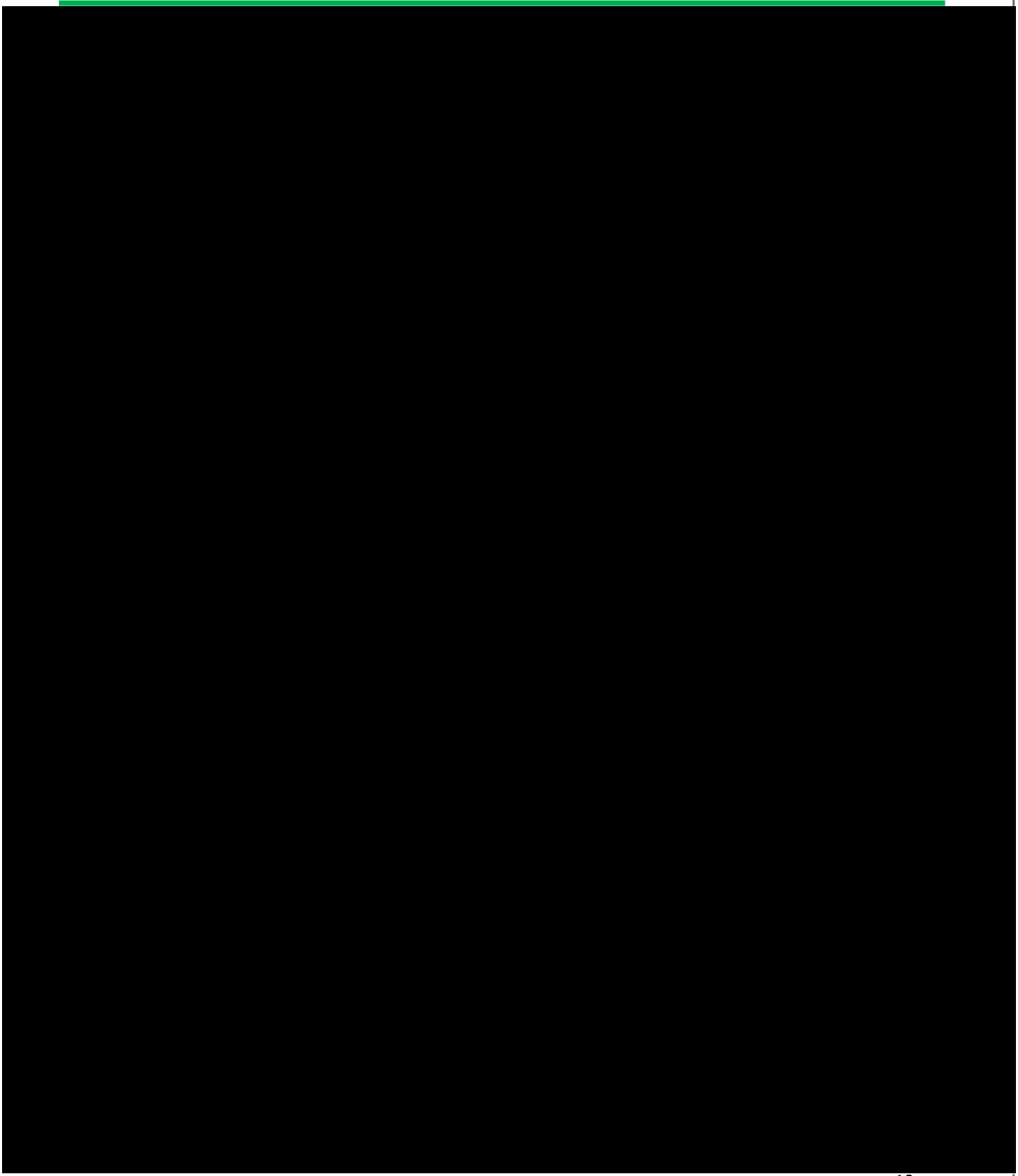
Item Description	CU	[redacted]	Amount
OTHER OTHER Substation Work	16-ALL14		$55,000.00

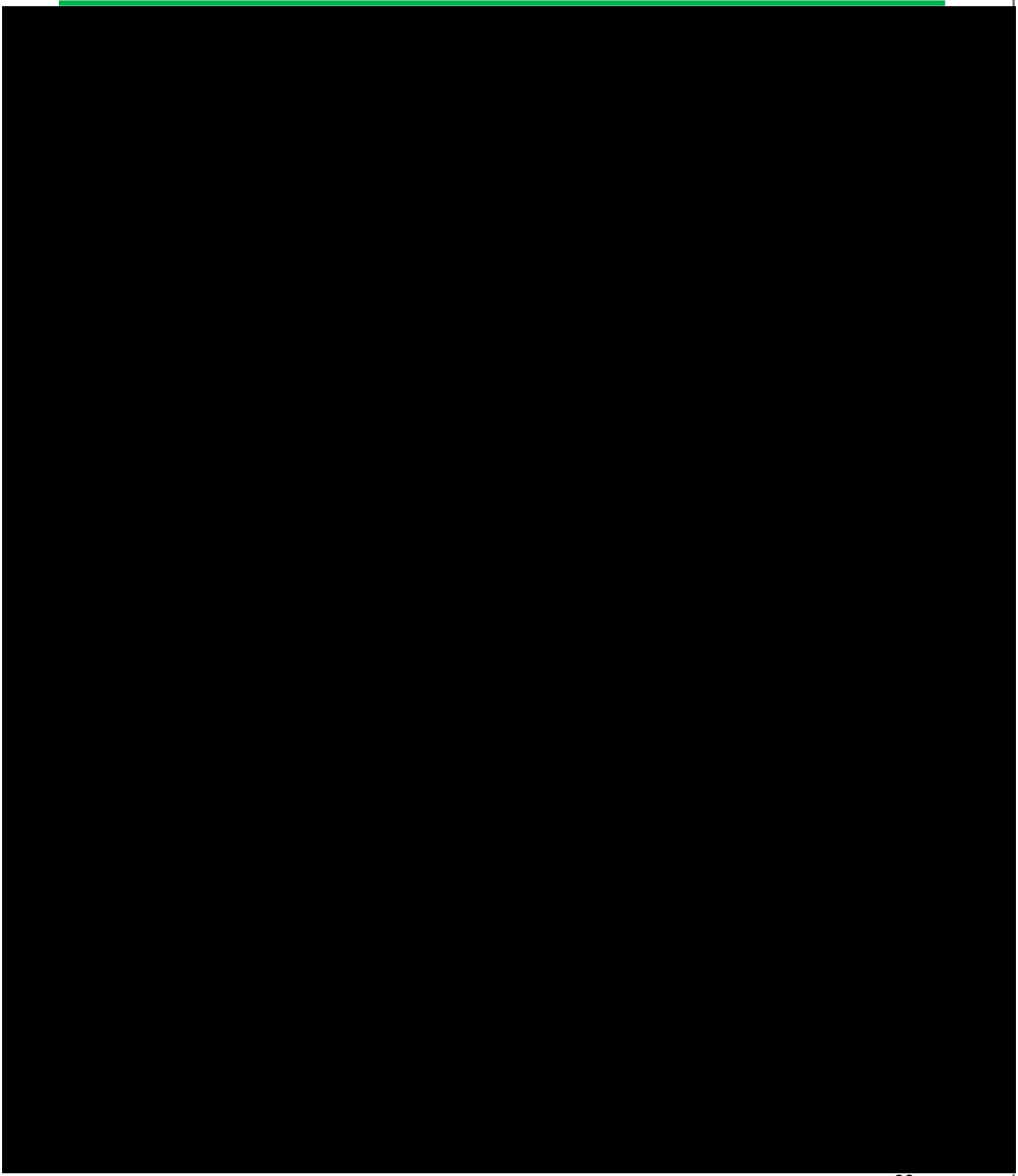
Associated / Impacted Devices

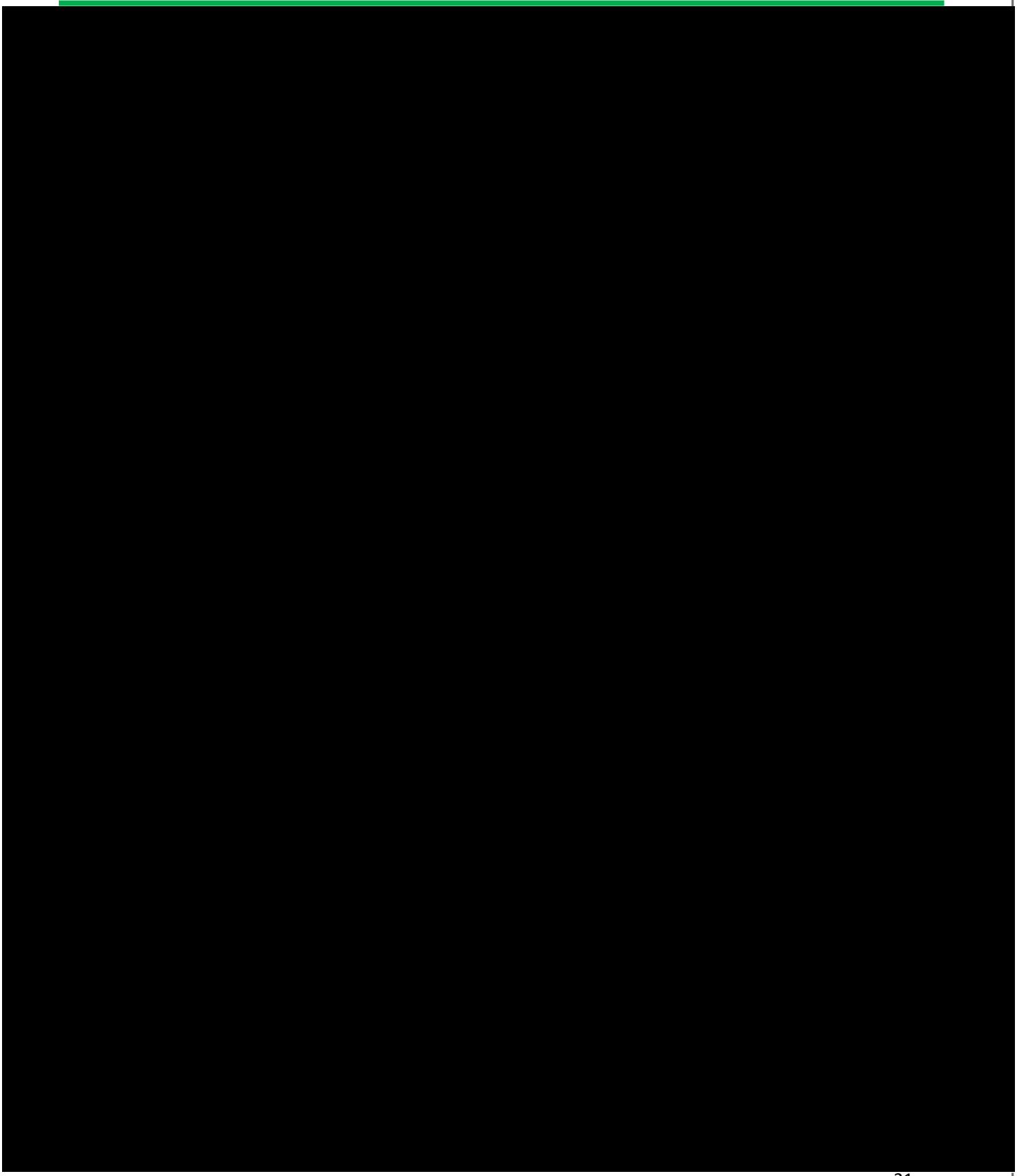
Status	Type / SysID	Street / Cross St	Structure / Town	Circuit	Map	Cust	Notes

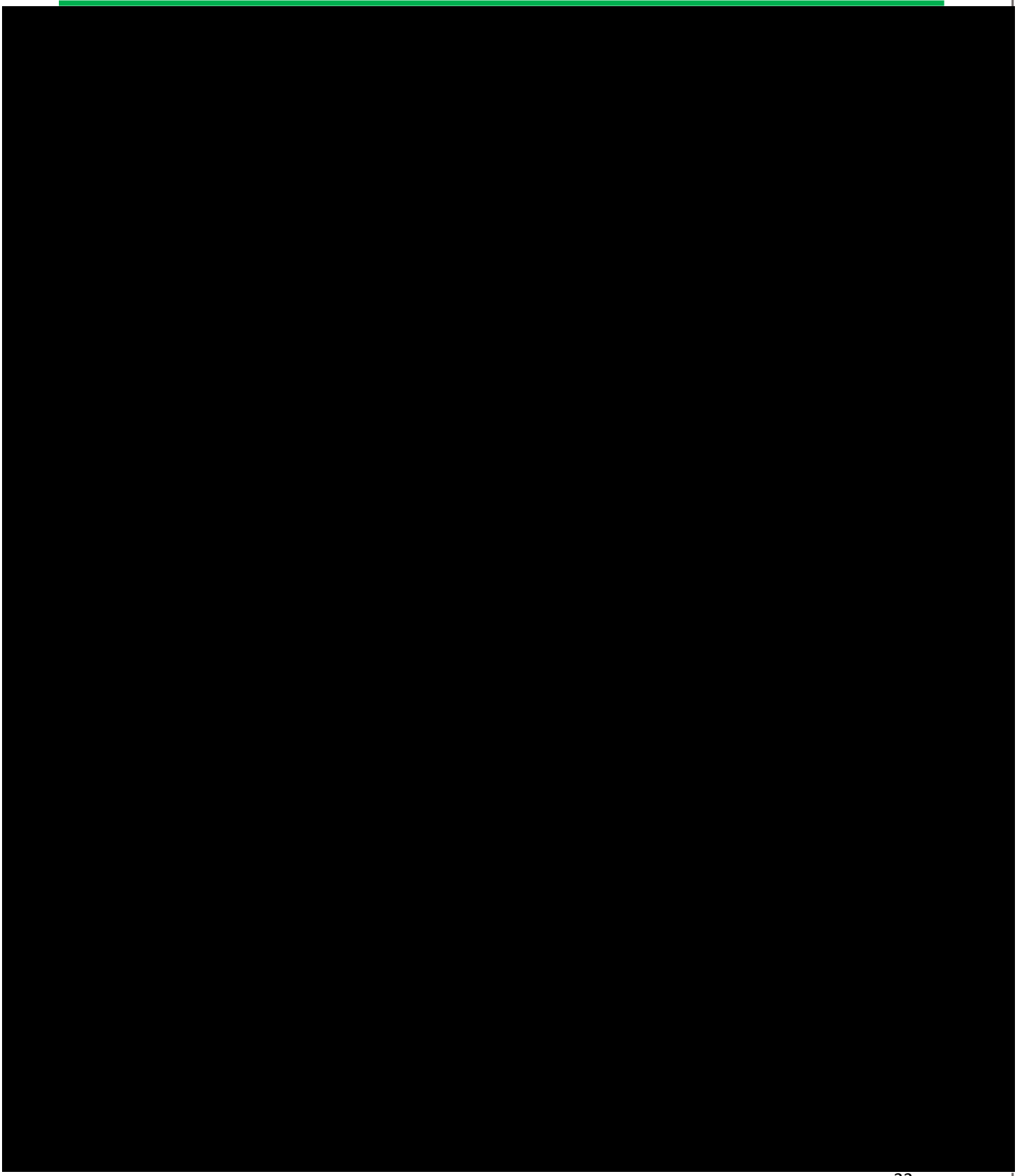


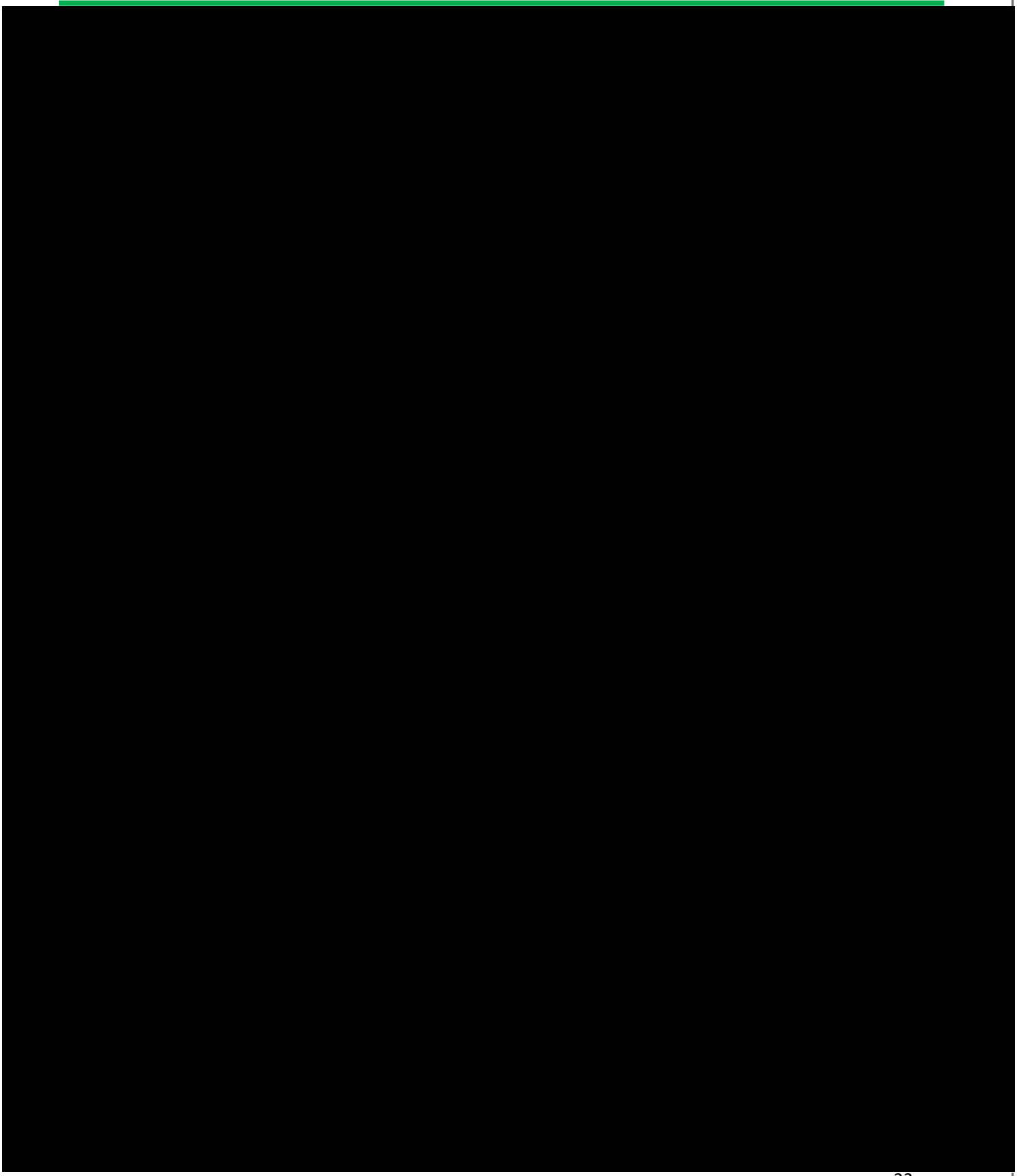


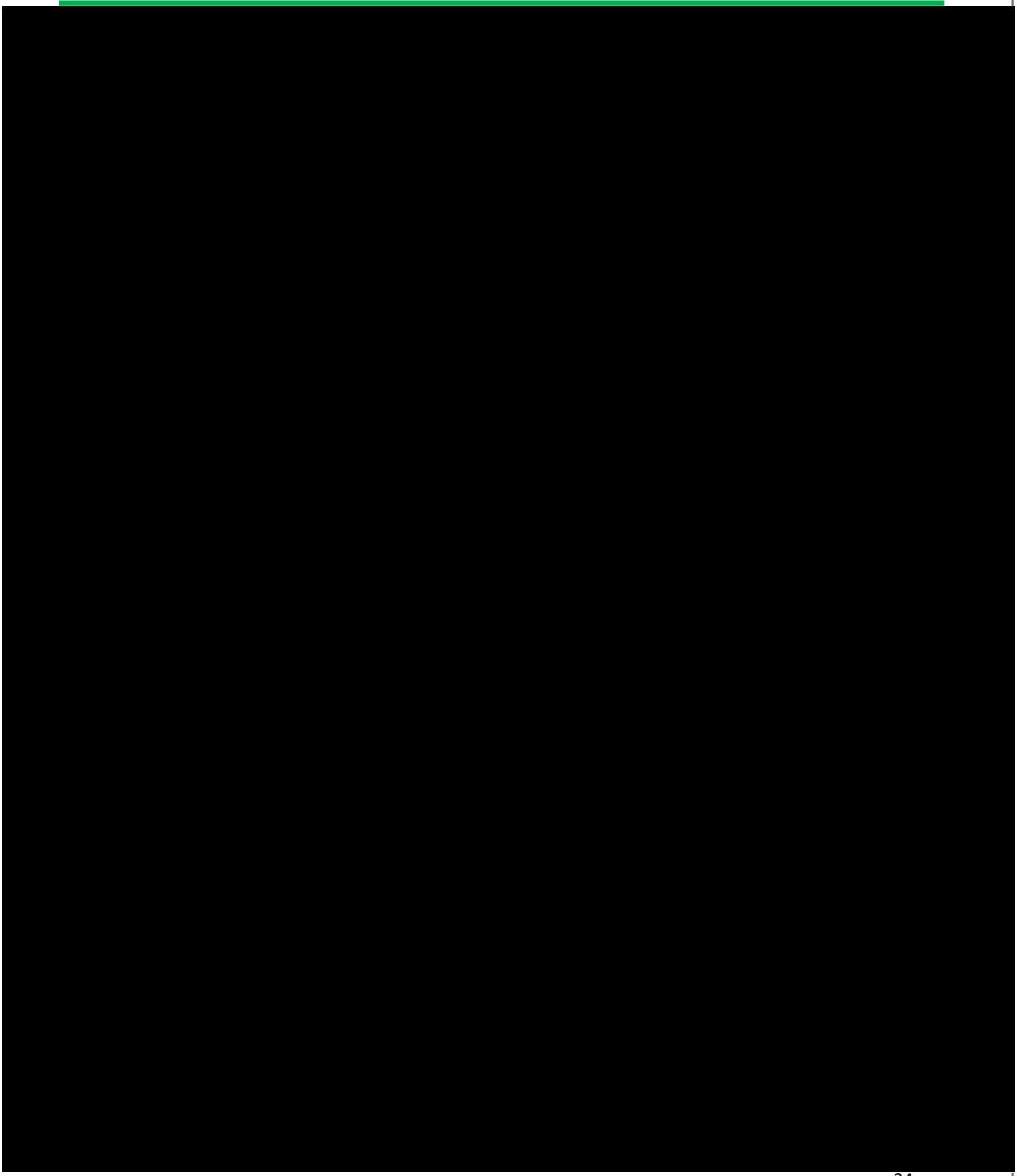


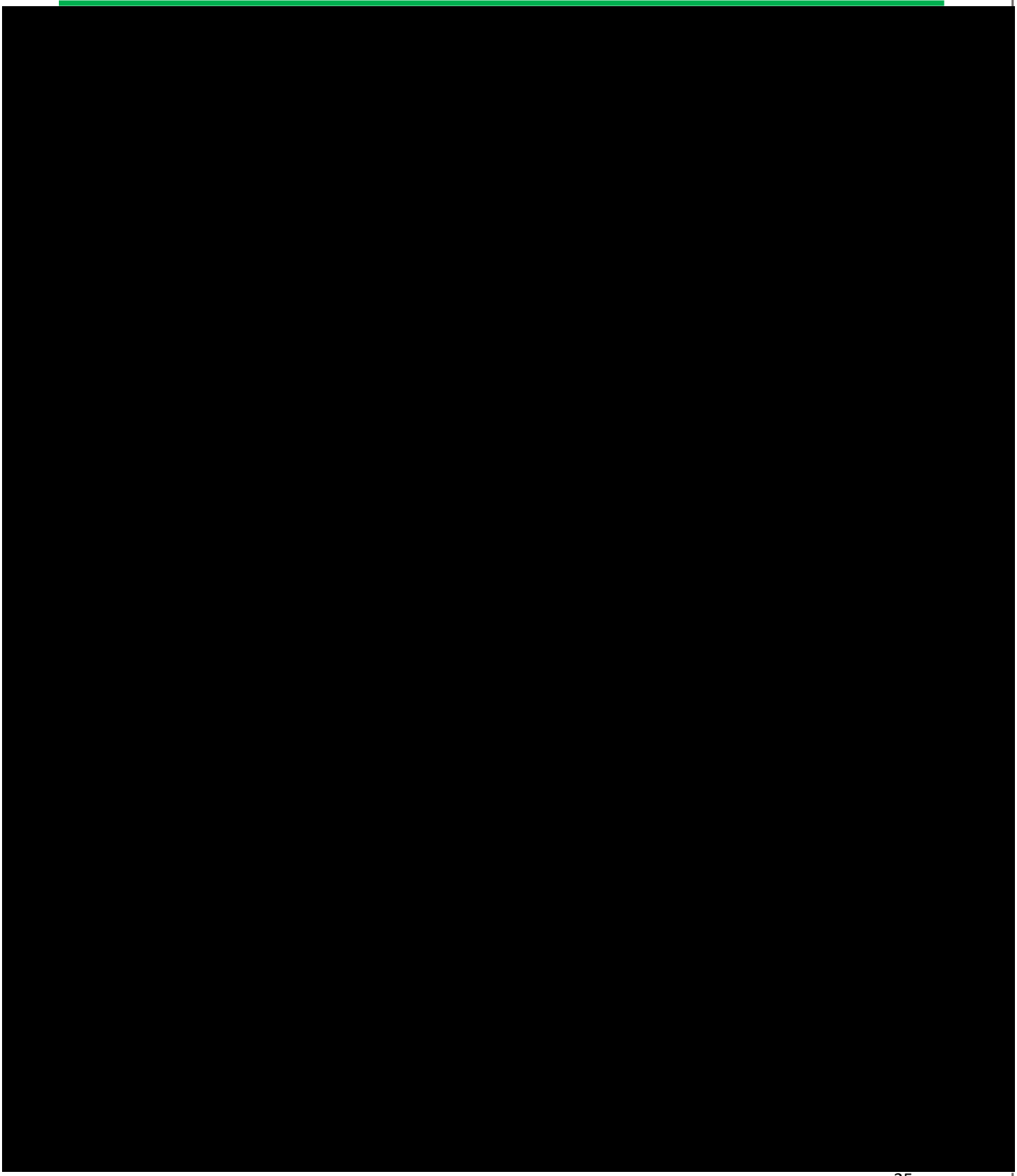


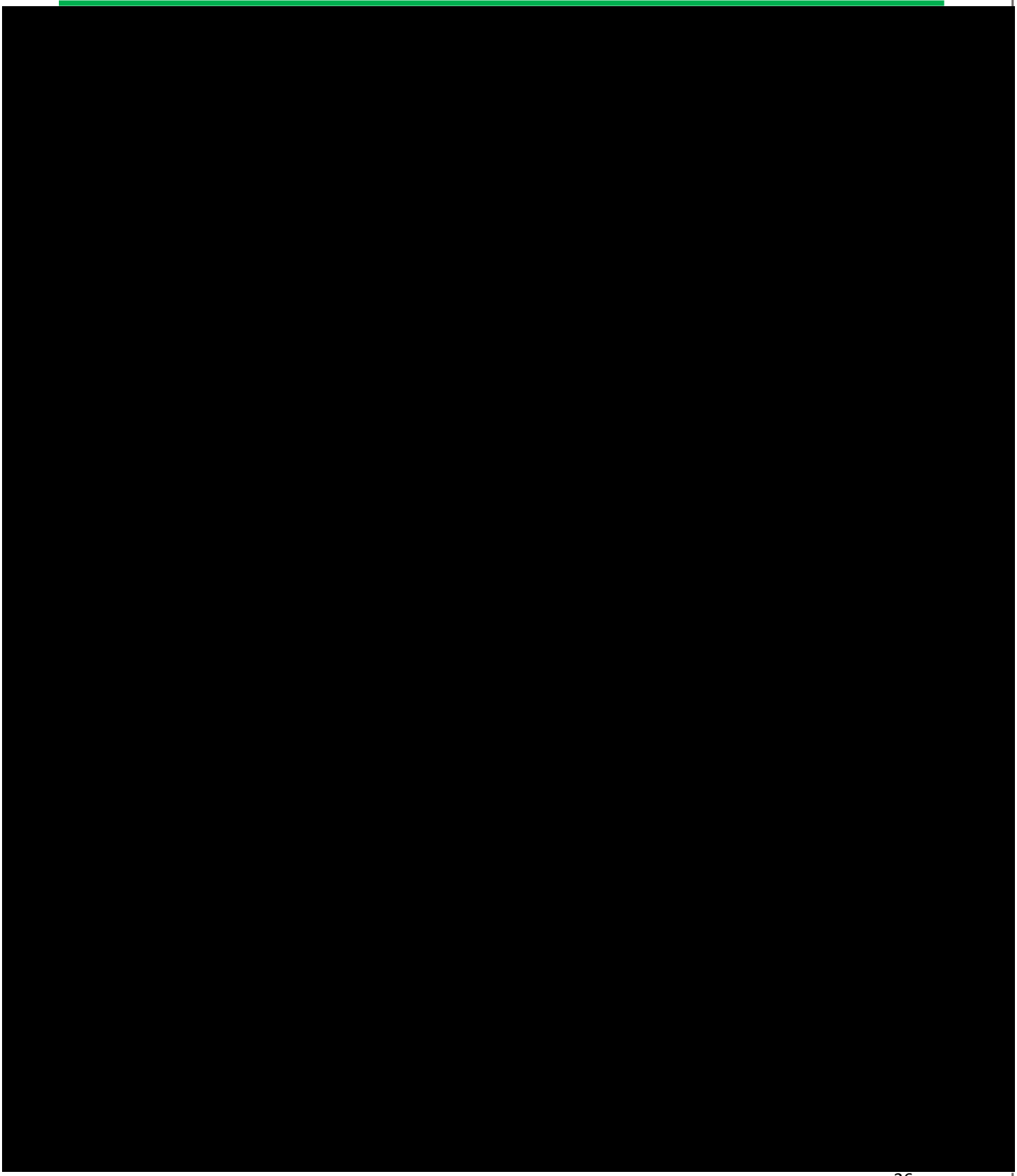


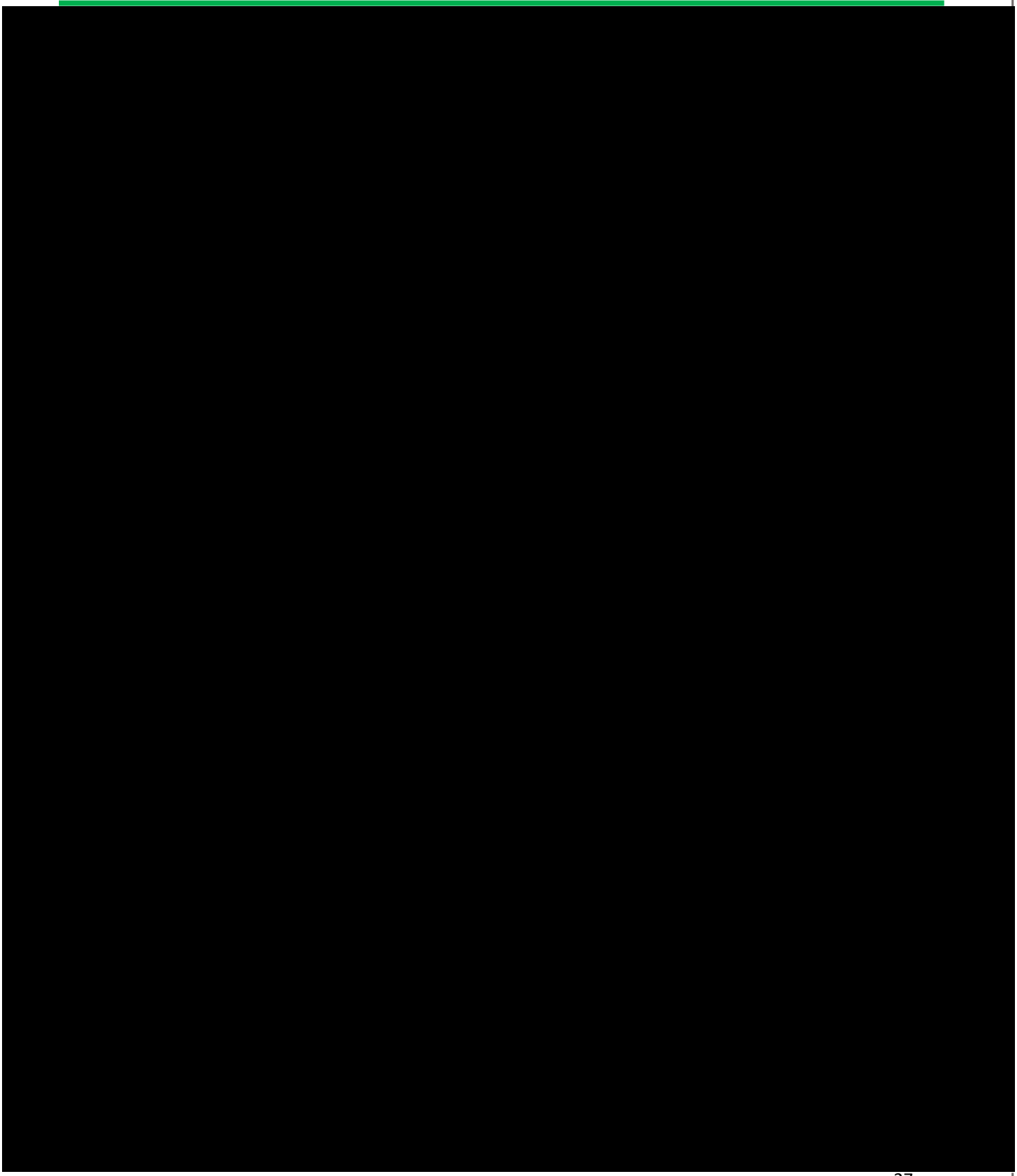


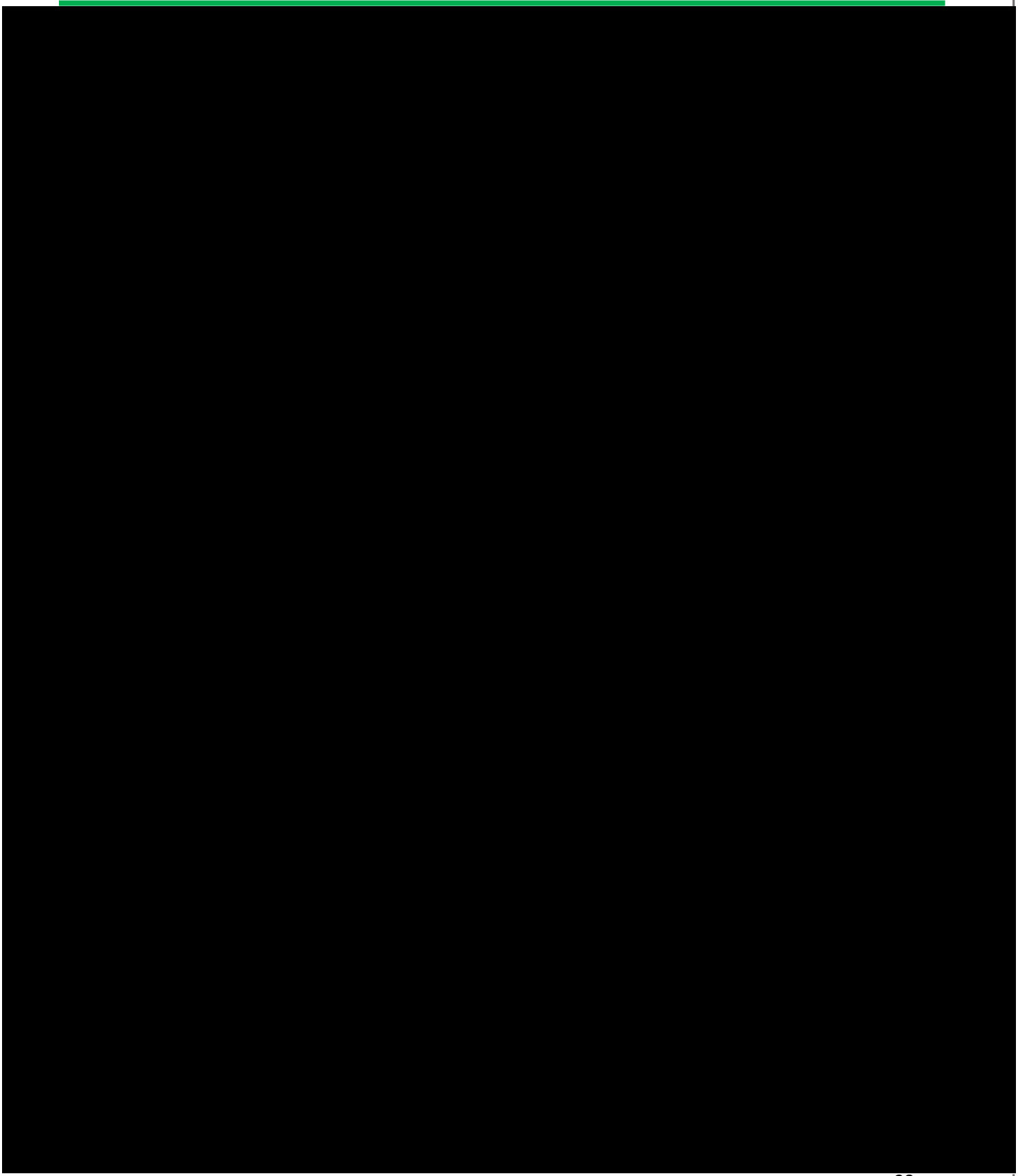


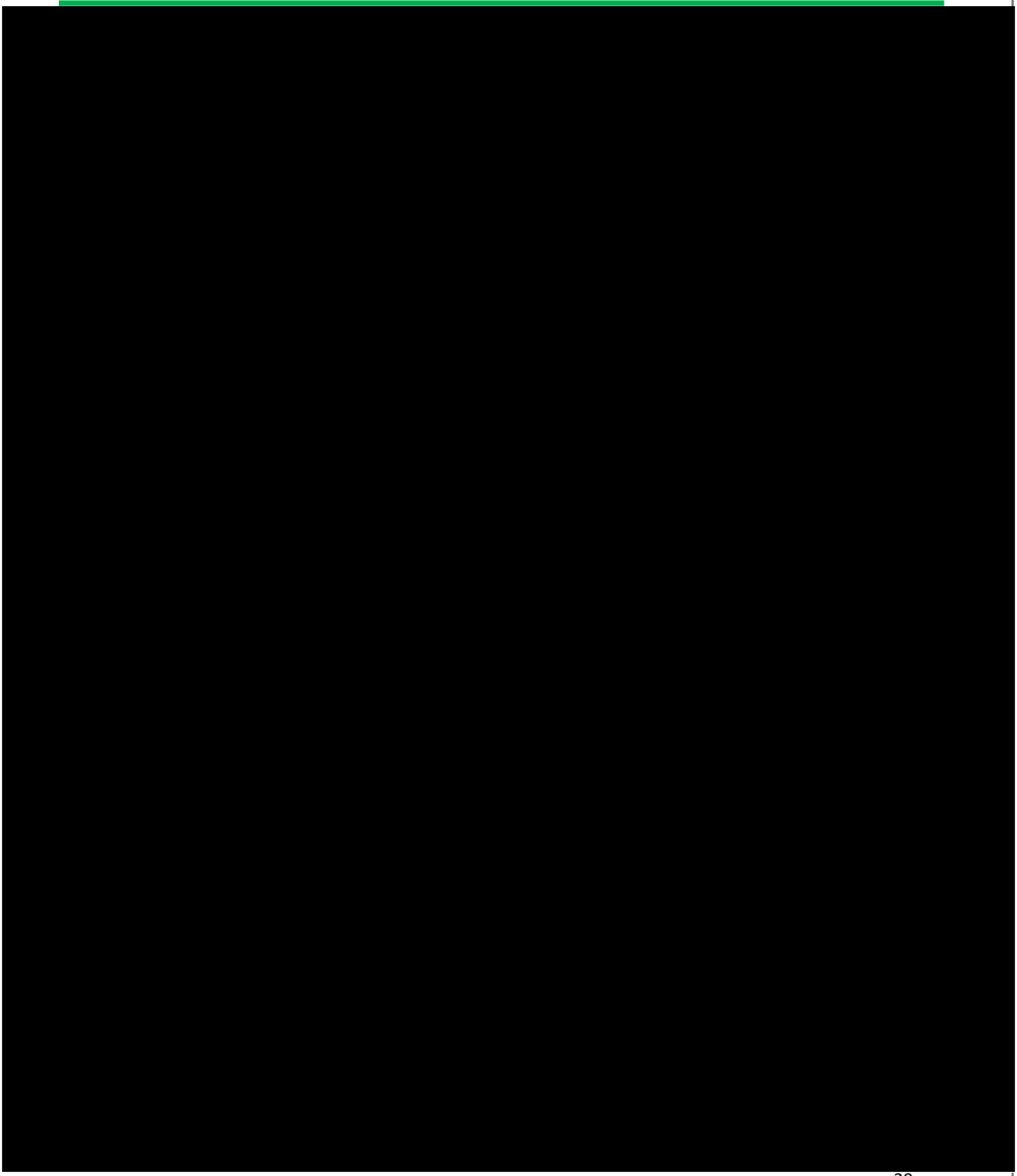


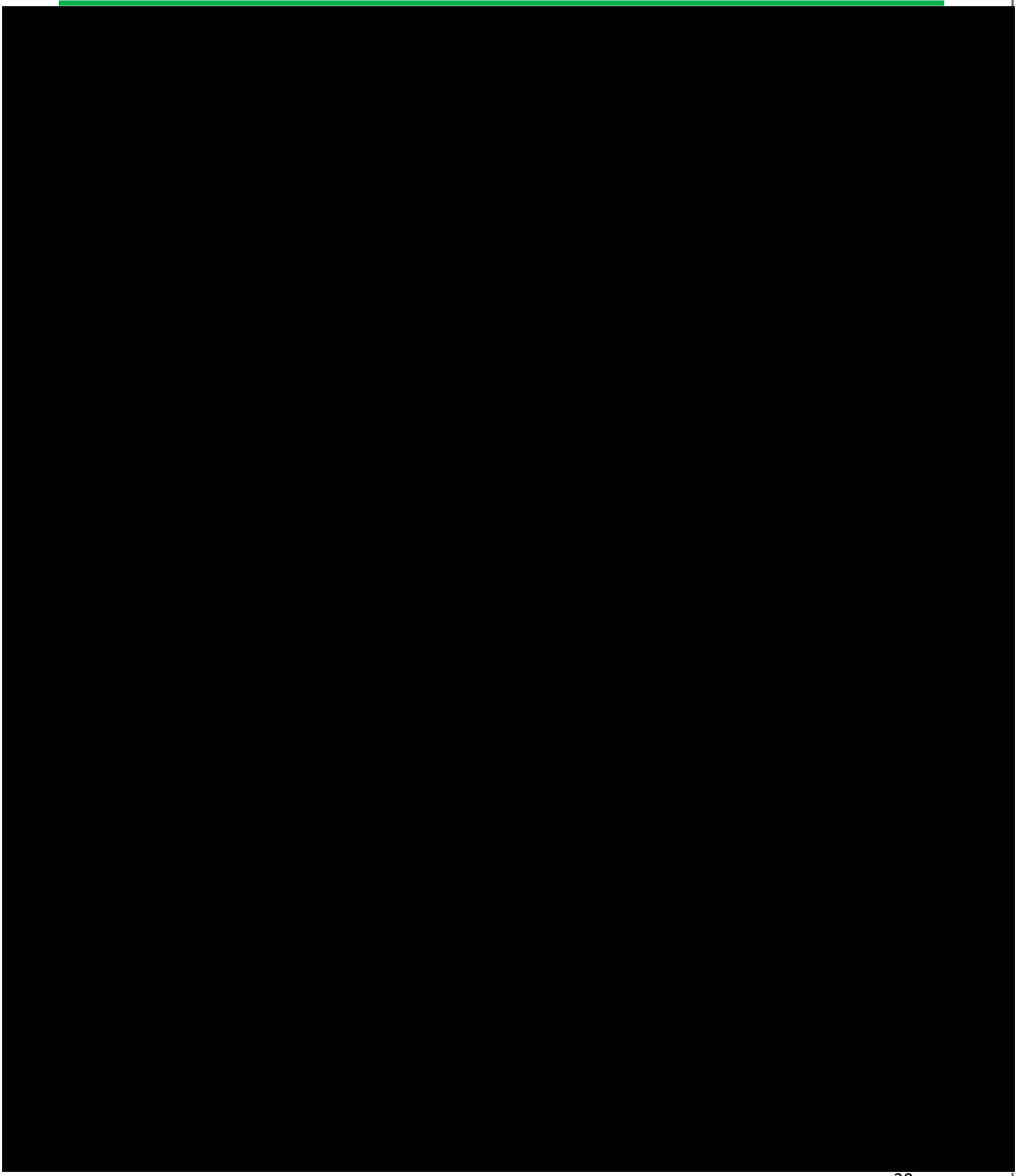


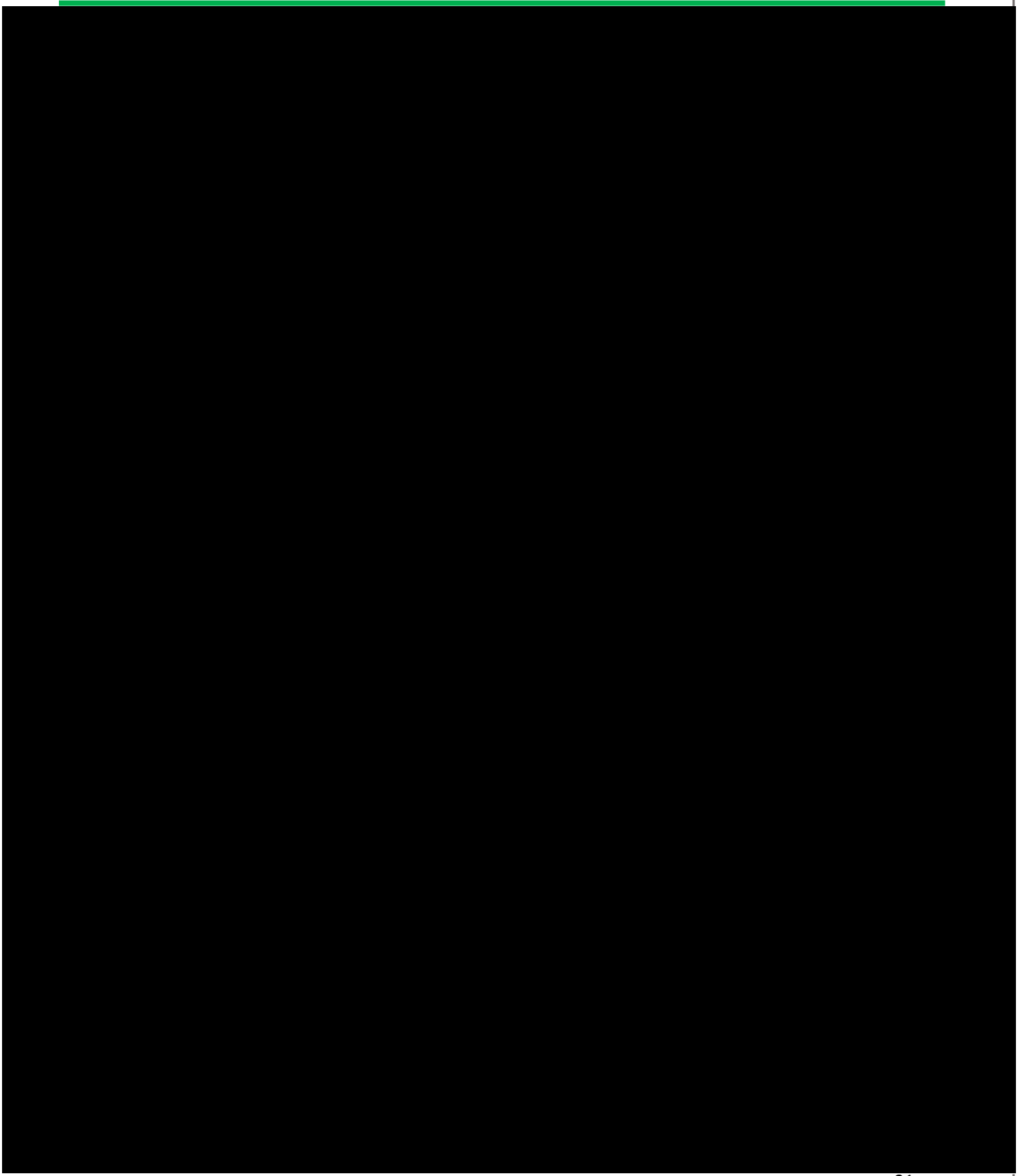


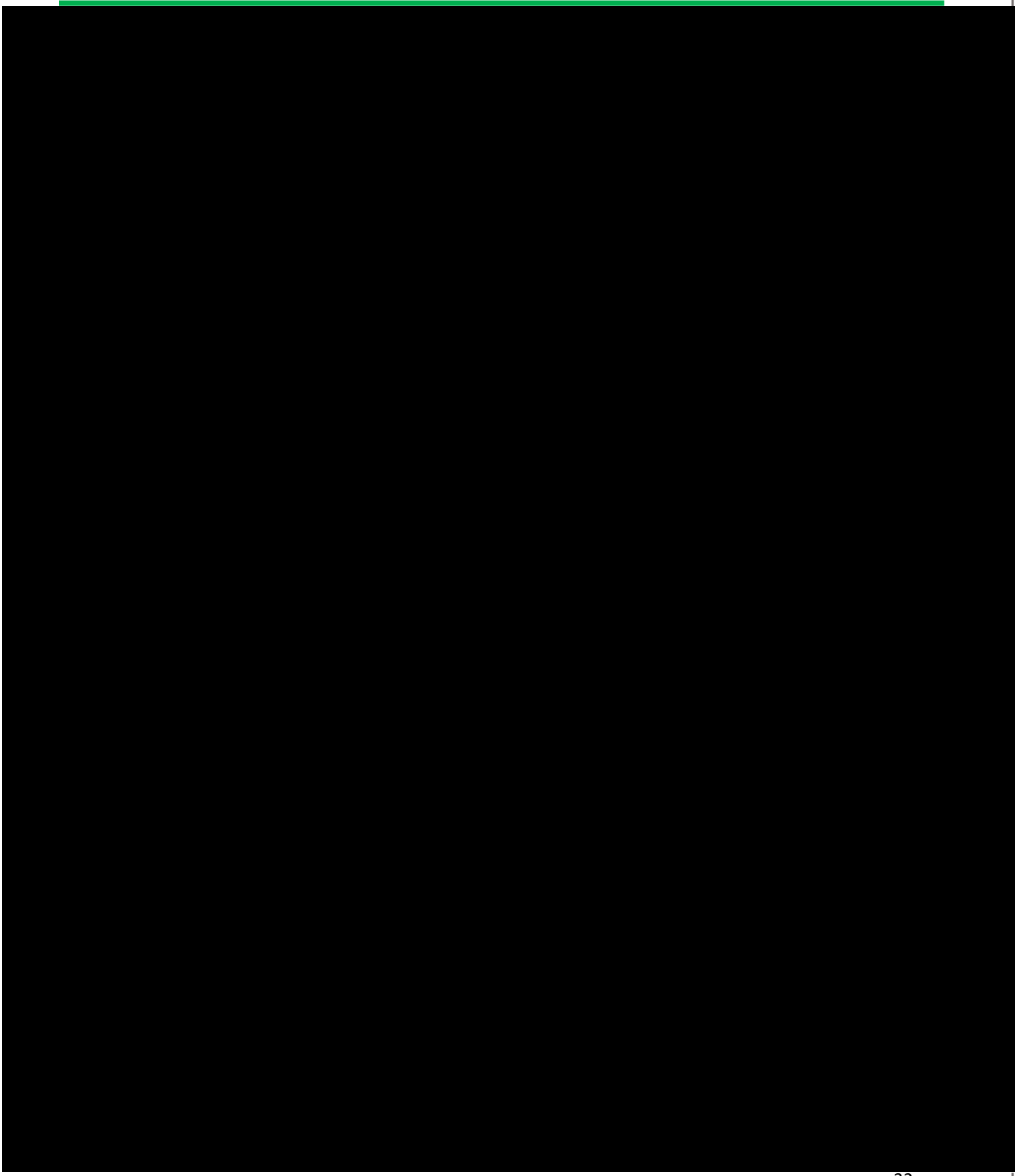


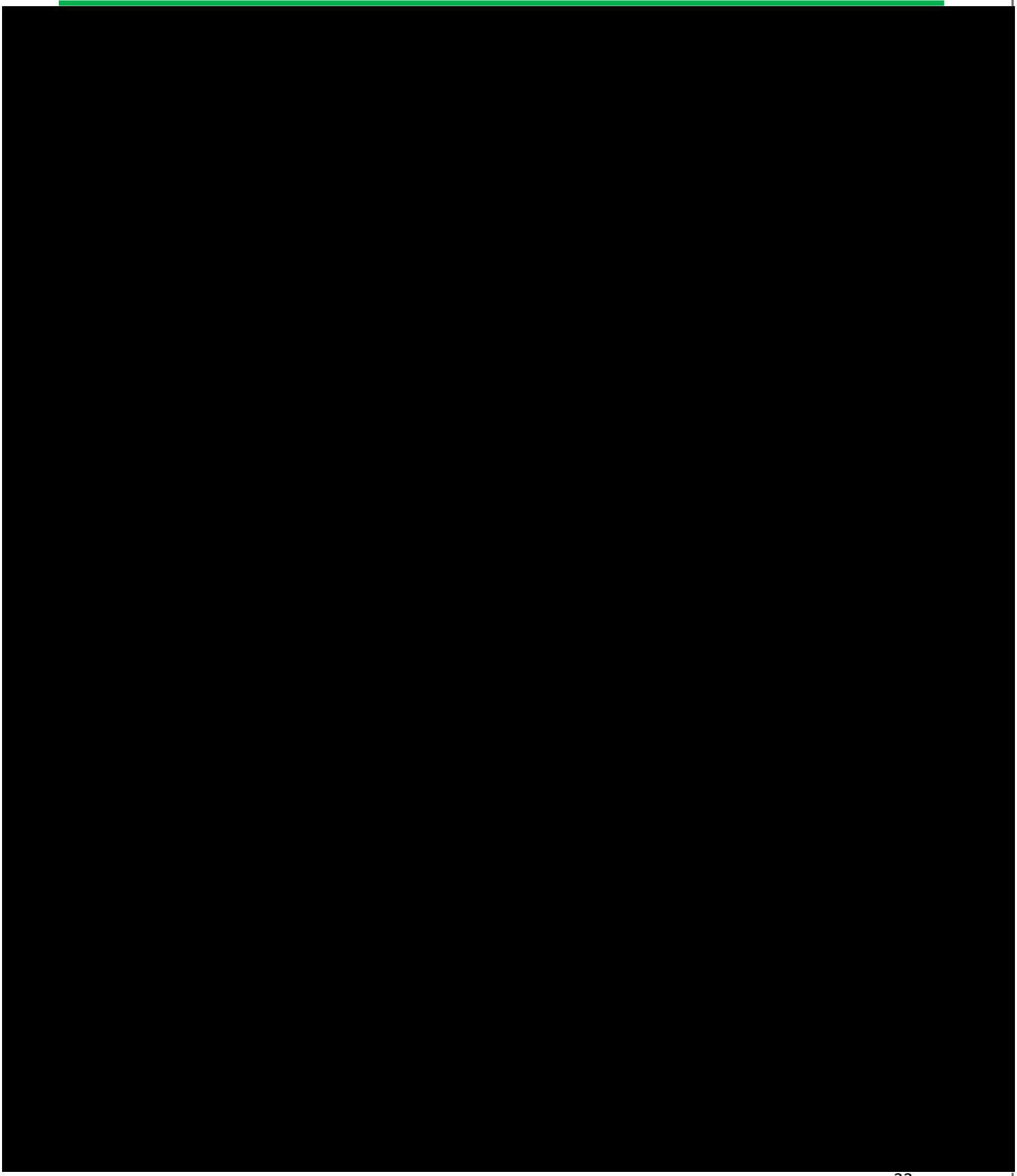












EVERSOURCE

Operations Project Authorization Form

Project Title: CDOT Flanders Rd Relocation	**Project Number: CD02031**
Date Prepared: 08/29/2022	**Company**: Eversource CT
Organization: Electric Field Operations	**Class(es) of Plant**: D Line
Project Initiator: [redacted]	**Project Category**: Line Relocations/Act of Public Authority
Project Manager [redacted]	**Project Type**: Specific
Project Sponsor [redacted]	**Capital Investment part of original Operating Plan**: No
Estimated in service date: 5/1/2023	**Emergency Related Request?** No
Eng./Constr. Resources Budgeted? No	**Facility Type** (check all that apply): ☐ PTF ☐ non-PTF ☒ Distribution
Total Gross Capital Request: $1,702K ($1,782K)	**Authorization Type**: Partial Funding

Executive Summary

The CT Department of Transportation has contacted Eversource concerning CDOT Project 44-156 Flanders Rd, East Lyme road improvements. This project affects Eversource facilities on Flanders Rd and overhead facilities crossing I-95 by on-ramp 75 in East Lyme, CT.

The CTDOT scope for this project includes widening Flanders Road (Route 161) to provide extra lanes heading north and south, changing the traffic pattern for southbound exit 74 on and off ramps, and lane widening on I-95 southbound exit 75 on ramp. [redacted] leaving the substations to underground. State of Connecticut DOT requires all Eversource facilities to be relocated by May 1, 2023.

This project is State funded under all other municipal projects and is 100% reimbursable.

EVERSOURCE

Project Costs Summary

Note: Dollar values are in thousands

Capital Costs	Year 2023	Year 2024	Year 2025	Total
Direct Capital Costs				
Internal Labor and Construction Equipment	$108	$0	$0	$108
Outside Services	$724	$0	$0	$724
Materials	$238	$0	$0	$238
Removals	$121	$0	$0	$121
Risk and Contingency	($292)	$0	$0	($292)
Other	$0	$0	$0	$0
Subtotal – Direct Costs	**$898**	**$0**	**$0**	**$898**
Indirect Capital Costs				
Indirect/Overheads (including benefits)	$767	$0	$0	$767
Capitalized interest or AFUDC, if any	$36	$0	$0	$36
Subtotal – Indirect Costs	**$803**	**$0**	**$0**	**$803**
Total Gross Capital Costs	**$1,702**	**$0**	**$0**	**$1,702**
Total Project Cost	**$1,782**	**$0**	**$0**	**$1,782**
Customer Contribution	**($1,782)**	**$0**	**$0**	**($1,782)**
Total Net Capital Project Costs	**($80)**	**$0**	**$0**	**($80)**

Technical Justification:

Project Need, Objective and Justification:

The CT Department of Transportation has proposed improvements on Flanders Road (Route 161) in the area of the [redacted] and on I-95 by southbound exit 75 on ramp-[redacted]

The objective of this project is to remove the facilities that conflict with the Flanders Road and I-95 highway widening and install new facilities aligning with the new roadway.

Project Scope:

The proposed project scope is as follows:

[redacted]

EVERSOURCE



Major Material:

600 feet of aluminum secondary.
4,300 feet of 1/0 neutral.
9 single-phase transformers.
3 three-phase transformers banks
11 Eversource Poles.
870 feet of 3 phase 556 AL bare primary for [redacted]
1,300 feet of three-phase 556 TW.
1 three-phase vertical disconnect.
1 recloser and control.
1,200 feet of three-phase 1,000 kcmil Cu cable.
1 three-phase padmount transformer.
650 feet of duct line.
2 bexholes.
3,000 feet of single-phase 1/0 TW.

EVERSOURCE

Background:

State DOT is requesting Eversource to relocate facilities in conflict with CDOT Project 44-156

Alternatives Considered:

Were alternative solutions considered/applicable? Include any cost/benefit analysis.

Project is a compliance obligation - no alterntives considered - no financial benefit

Regulatory Approvals:

Are Regulatory body approvals needed for the project?
No

If yes, provide detailed regulatory approvals

Project Schedule

Milestone/Phase Name	Estimated Date
100% Engineering Completion	7/15/2022
Construction Start	1/1/2023
Testing/Commissioning	4/1/2023
In Service Date	5/1/2023

EVERSOURCE

Risks and Risk Mitigation Plans

Risk Event	Risk Horizon	Likelihood of Occurrence	Risk Mitigation
Actual cost higher than estimated due to scope changes.	2023	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	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.
Materials Shortage or long lead times	2023	High	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.

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

