Operations Project Authorization Form

Approved on February 16, 2023 EPAC

Link to Meeting Minutes

Project Title: [redacted] Addition	**Project Number: CS00382**
Date Prepared: 02/06/2023	**Company: Eversource CT**
Organization: System Planning	**Class(es) of Plant: D SS**
Project Initiator: [redacted]	**Project Category: Stations - Transformers**
Managing Organization: Transmission / Major Projects	**Schedule ID#: CS003821**
Project Manager: [redacted]	**Project Type: Specific**
Project Sponsor: [redacted]	**Capital Investment part of original Op Plan: Yes**
Estimated in service date: January 2024	**Emergency Related Request? No**
Eng./Constr. Resources Budgeted? Yes	**Facility Type** (check all that apply): ☐ PTF ☐ non-PTF ☒ Distribution ☐ N/A (General Plant)
Total Capital Request: $9,773K	**Authorization Type: Full Funding**

[1] Executive Summary

[redacted]

[2] PROJECT COSTS SUMMARY

Note: Dollar values are in thousands

Line item Category	Prior Authorized	Actuals to Date	2023 to Go	2024	2025	2026	2027	2028	Total
1. ROW / Easements / Land Acquisition									
2. Environmental Approvals / Permits									
3. Outreach	$1								
4. Siting Approvals / Permits	$8		$23	$36					$59
5. Engineering / Design	$663	$188	$163	$197					$548
6. Materials (Eversource purchased)			$253	$391					$644
7. Construction (incl materials by contractors)	$9	$42	$1,460	$2,293					$3,795
8. Testing / Commissioning			$277	$436					$713
9. Project Mgmt Team	$158	$18	$84	$63					$165
10. Removals				$124					$124
11. Other									
12. Risks	$125		$310	$422					$732
SUBTOTAL DIRECTS W/ RISKS	$964	$248	$2,570	$3,962					$6,779
13. Indirects/Overhead	$742	$166	$775	$1,214					$2,154
14. AFUDC	$60	$13	$125	$388					$526
PROJECT TOTAL – BASELINE BUDGET	$1,766	$426	$3,469	$5,563					$9,459
15. Contingency	$49		$125	$189					$314
TOTAL CAPITAL REQUEST	$1,815	$426	$3,594	$5,752					$9,773
16. Reimbursables/Customer Contribution									
PROJECT TOTAL (LESS REIMBURSABLES)	$1,815	$426	$3,594	$5,752					$9,773
O&M									
TOTAL REQUEST	$1,815	$426	$3,594	$5,752					$9,773

Detail other costs, project risk items and their allocations:

Risk	Allocation
1. Potential UG Obstructions	$172,000
2. Severe Weather, Delays, OT	$120,000
3. Design Development	$102,000
4. Missing Scope	$59,000
5.Existing Cabinets have PCB and Asbestos	$42,000
6. SCLL Issues	$68,000
7. Environmental Issues (i.e., contaminated soil)	$169,000
Total	$732,000

The risks listed above account for 7.5% of the total project budget.

Explain unique payment provisions, if applicable:

Not applicable

Identify and detail any unique O&M impacts resulting from this project:

Not applicable

[3] TECHNICAL JUSTIFICATION

Project Need, Objective and Justification

Project Need Statement:

[redacted]

[redacted]

Project Scope

I. Eversource Scope of Work

[redacted]

[redacted]

II. [redacted]

[redacted]

III. [redacted]

1. [redacted]

[redacted]

[redacted]

Substation Equipment

Station	Device Position / Nomenclature	Device Removals *include manufacturer*	Device Additions *include manufacturer*
[redacted]			

Background

[redacted]

[redacted]

[4] ALTERNATIVES CONSIDERED

[redacted]

[redacted]

Alternative 2 – [redacted]

[redacted]

[5] PROJECT SCHEDULE

Milestone	Scheduled Completion Date
IFR Approval	May 2020
SDC Approval (for applicable projects)	March 2022
Conversion of Tx development costs, 183 to 107 (applicable to projects that require SSF approval and/or ISO preferred alternative selection)	N/A
EPAC Partial Funding Approval (for applicable projects)	April 2022
Preliminary Design Completion (or latest pre-full funding design phase)	January 2023
EPAC Full Funding Approval	February 2023
Siting Submittal of Exempt Mod (for applicable projects)	March 2023
Start of Construction	July 2023
Project In-Service Date (ISD)	January 2024
Project Need Date (for applicable projects)	June 2023
ISO Related Milestones: (for applicable projects)	
• ISO Preferred Alternative Selected	N/A
• PAC Presentation	N/A
• TCA Submittal	N/A

Please see Attachment B for the full P6 schedule.

[6] REGULATORY APPROVALS

Exempt Modification submission to the Connecticut Siting Council (CSC) will be required.
Expected filing date is 04/01/2023.

[7] Risk and Risk Mitigation Plans

Contingency:

A contingency amount of $314K has been included in the total project estimate to account for any unknowns.

Risk Mitigation:

The risks listed below account for 7.5% of the total project budget.

Risk	Mitigation
1. Potential UG Obstructions	UG obstructions may be observed during Civil excavations and will be taken care of at that time. Have developed alternative paths for conduit. Risk is allocated in the project budget for unexpected UG obstructions.
2. Severe Weather, Delays, OT	Construction delays caused by weather and storm duty are possible. Try to be flexible with construction schedules. Risk is allocated in the project budget for delays.
3. Design Development	The design and review process will be done in detail as the project IFC design is being completed. Risk is allocated to the project budget for any changes in the detailed design.
4. Missing Scope	Accounts for any changes that may occur during the Detailed/IFC Design phase that were not provided in the current scope. Engineering checklist has been completed to ensure all deliverables are accounted for. Risk is allocated to the project budget for changes to the design
5. Existing Cabinets have PCB and Asbestos	Removal of PCB and asbestos may be needed. Risk is allocated to the project budget if removal is required.
6. SCLL Issues	Most construction will be done without the need of outages; therefore, minimizing any SCLL concerns. Current discussions with SCLL committee show low risk; most of the construction will be completed without taking any outages. Risk is allocated to the project budget for any SCLL changes.
7. Environmental Issues	As civil construction starts there could be contaminated soil that would require to be dealt with. Contaminated soil is not expected, but soil samples will be taken to verify. Risk is allocated in the project budget for removal of any possible contaminated soil.

[8] REFERENCES

References
1. Distribution System Planning Guide, dated September 22, 2020
2. CS00382 [redacted] dated July 10, 2020
3. CS00382 [redacted] SSF; dated 3/7/2022
4. CS00382 [redacted] PF PAF; dated 3/24/2022
5. Eversource [redacted]

[9] ATTACHMENTS (One-Line Diagrams, Images, etc.)

Attachment	Included in Submittal?
A. CS00382 C-23-15 [redacted] Cost Estimate	*YES*
B. [redacted] chedule	*YES*
C. CS00382 [redacted] Constructability Review	*YES*
D. Nomenclature [redacted] CW Removals	*YES*
E. Nomenclature [redacted] CW Additions	*YES*
F. Nomenclature [redacted] CW Additions	*YES*

Project Checklist - Transmission & Substation Capital Project			
Project Name: [redacted] Transformer Addition		**Project Number: CS00382**	
Facility Type: ☒BPS ☒BES ☐PTF ☐PTF non-regional ☐non-PTF ☐CIP ☒Distribution ☐General Plant			
PLANNING			
Is a NX-9 required?	Yes		
Is an ISO-NE PAC presentation required?	No		
ISO-NE Presentation Date (if completed):	Enter Date		
Cost in ISO-NE Presentation ($M) (if completed):	Enter Cost ($M)		
Is a PPA required?	Yes		
ISO-NE Approval Date (if completed):	Enter Date		
Is a TCA Application Required?	No		
TCA Submittal Date (if submitted):	Enter Date		
Cost in TCA Submittal ($M) (if submitted):	Enter Cost ($M)		
Enter ISO-NE RSP / Asset Condition ID, if assigned:	Enter ISO-NE ID		
PLANNING/PROTECTION & CONTROLS			
Are RAS/SPS/UVLs affected?	No		
OPERATIONS			
Outage Required?	☒ Primary Equipment (Power Transfer)	☐ Secondary Equipment (P&C only)	☐ Outage Not Required
Do SCLL Conditions Exist?	Yes		
Has an outage schedule been approved?	No		
Are Operations & Maintenance procedures/training required?	No		
STANDARDS			
Does the project include standard equipment and designs?	Yes		
SUBSTATION ENGINEERING			
Does this impact Revenue Metering	No		
Is preliminary short circuit/ breaker duty analysis required?	No		
Are there any changes to the baseline audible noise?	TBD		
Is there an impact to the existing ground grid?	Yes		
Is a Transient Over Voltage (TOV) analysis required?	No		

Project Checklist - Transmission & Substation Capital Project	
Project Name: [redacted]ransformer Addition	**Project Number: CS00382**
P&C ENGINEERING	
OP-22 - Are PMUs and DDR required?	No
If BPS, is an NPCC Directory #4 presentation required?	No
Are ISO-NE OP-24 Appendix B updates necessary?	Yes
TRANSMISSION LINE ENGINEERING	
Are there any changes that affect the baseline EMF?	No
Are there any changes that affect the baseline EMI?	No
SITING	
Has Siting reviewed this project?	Yes
Name of Siting contact:	[redacted]
Is a Siting filing required? *(If yes, list in regulatory approvals section)*	Yes
PERMITTING	
Is there any permitting required? *(If yes, list in regulatory approvals section)*	No
PROJECT SERVICES (OUTREACH) and ROW WORK COORDINATION	
Has Project Services reviewed this project?	Yes Choose an item
Name of Project Services contact:	[redacted]
What is the level of outreach expected?	Low
Is any part of this project in an Environmental Justice Community?	No
Has ROW Coordination reviewed this project?	No
Is this project coordinating with other existing scheduled work?	No
INITIATOR	
Has a field constructability review been completed?	Yes
INVESTMENT RECOVERY	
Does the project require development of an Investment Recovery plan?	No
COST ESTIMATING	
What team/firm prepared the cost estimate?	Estimate was prepared by the Eversource Estimating Team
Name of the person who prepared the estimate:	[redacted]
Was the estimate reviewed by Eversource Estimating?	Yes - Full Review

ESTIMATE SUMMARY

Project Title: Transformer Addition - Southington 4C
Project Mgr/Lead: [redacted]
Project Number: CS00382
WO & Task #: CS003821
Estimate revision #: 00
Estimate Type - Station work

Estimate #: C-23-15
Date of Estimate:02/03/2023
Estimate done by: [redacted]
In Service date (ISD):12/31/2024

ESTIMATE SUMMARY

Estimate Type: Planning

WBS	Description	TOTAL	% of Directs	% of Total	Priors	2023	2024	2025	2026	2027
1	ROW / Easements / Land purchases									
2	Environmental Approvals / Permits									
3	Outreach									
4	Siting Approvals / Permits	$58,900	0.9%	0.6%		$22,600	$36,300			
5	Engineering / Design	$547,600	8.1%	5.6%	$188,000	$163,000	$196,600			
6	Materials (Eversource purchased)	$643,700	9.5%	6.6%		$252,800	$390,900			
7	Construction (incl materials by contractors)	$3,795,100	56.0%	38.8%	$41,900	$1,460,100	$2,293,100			
8	Testing / Commissioning	$713,000	10.5%	7.3%		$276,900	$436,100			
9	PMT Project Mgmt Team	$164,800	2.4%	1.7%	$17,600	$84,300	$62,900			
10	Removals	$123,600	1.8%	1.3%			$123,600			
11	Other									
12	Risks	$732,000	10.8%	7.5%		$310,000	$422,000			
125	**Project Directs Total w/Risks**	**$6,778,700**	100.0%	69.4%	**$247,500**	**$2,569,700**	**$3,961,500**			
13	Indirects/Overhead	$2,154,300		22.0%	$165,900	$774,600	$1,213,800			
14	AFUDC	$525,800		5.4%	$13,000	$125,000	$387,800			
138	**Project Total - Baseline Budget**	**$9,458,800**		96.8%	**$426,400**	**$3,469,300**	**$5,563,100**			
15	Contingency	$313,800		3.2%		$125,100	$188,700			
	Project Total - Funding Approval Level	**$9,772,600**		100.0%	**$426,400**	**$3,594,400**	**$5,751,800**			
16	Reimbursables/Customer Contribution									
166	**Project Total (less reimbursables)**	**$9,772,600**			**$426,400**	**$3,594,400**	**$5,751,800**			
	Cost per key qty (if appl)	9,772,600	$'s / EA 62.5 MVA SS Transformer							
	Amount of Escalation included above	$200,000					$200,000			
6	Total materials - Eversource	$643,700				$252,800	$390,900			
	Total materials - Contractor	$1,521,400				$597,800	$923,600			
	Total materials	$2,165,100				$850,600	$1,314,500			

NOTE: Risk / Contingency is 12% of Project Total Costs (incl escal/indirects/AFUDC but excl reimb.)

Estimate Range	**-25%**	-	**25%**
	$7,329,000	-	**$12,216,000**

Alt Estimate Summary for PPI Calc (escalation separate)

Estimate #: C-23-15
Date of Estimate:02/03/2023

Project Number: CS00382
WO & Task #: CS003821

		TOTAL w/ escal broken out
ROW / Easements / Land purchase	$	-
Environmental Approvals / Permit	$	-
Outreach	$	-
Siting Approvals / Permits	$	57,200
Engineering / Design	$	538,200
Materials (Eversource purchased)	$	2,126,628
Construction (incl materials by co	$	2,208,372
Testing / Commissioning	$	692,300
PMT Project Mgmt Team	$	161,800
Removals	$	120,000
Other	$	-
Risks	$	732,000
		$6,636,500
Indirects/Overhead	$	2,096,500
AFUDC	$	525,800
	$	-
		$9,258,800
	$	-
Contingency	$	313,800
		$9,572,600
	$	-
	$	-
	-	
		$9,572,600
	$	200,000
Escal total		**$9,772,600**
Check total		

COMMENTS

Project Scope: [redacted]

Assumptions/Clarifications: [redacted]

RISKS

Potential UG Obstructions	$ 172,000
Severe Weather, Delays, OT	$ 120,000
Design development	$ 102,000
Missing Scope	$ 59,000
Existing Cabinets have PCB and Asbestos	$ 42,000
SCLL Issues	$ 68,000
Environmental Issues	$ 169,000

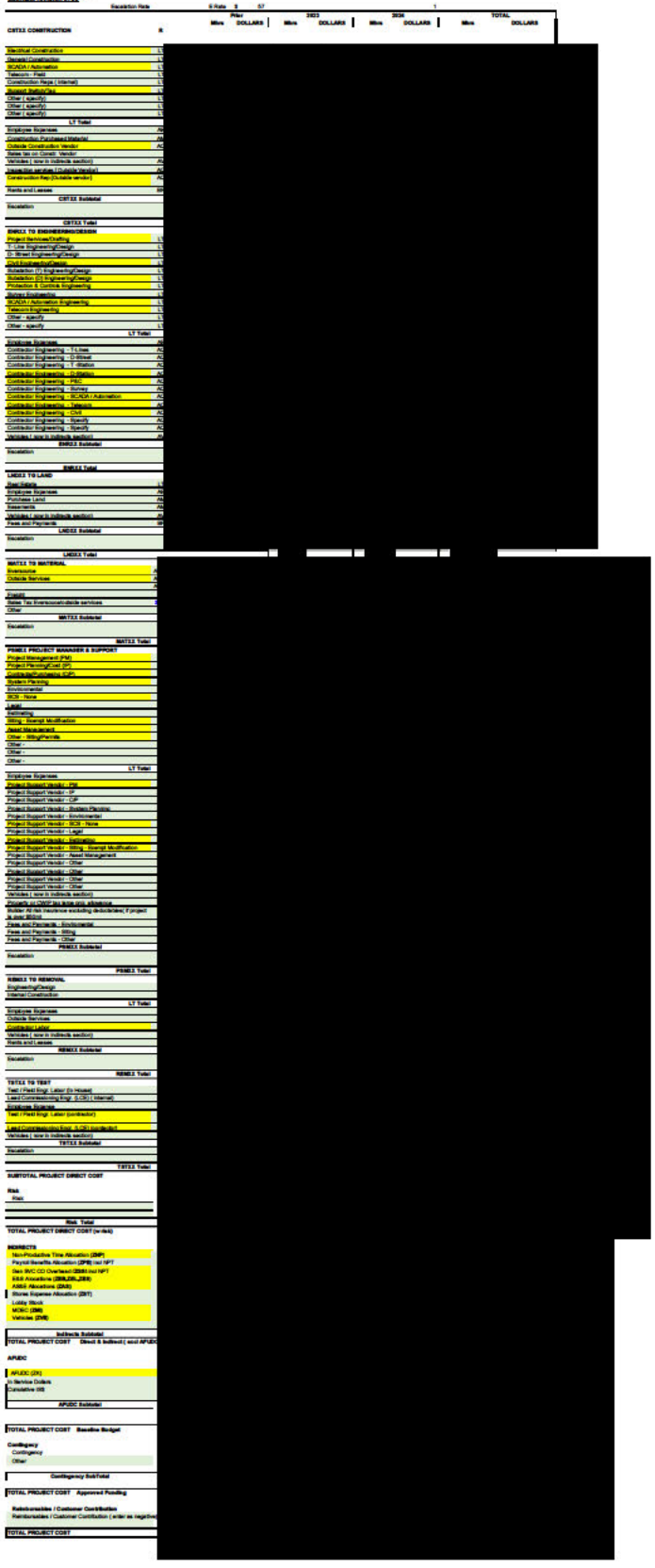
REDACTED

UNESCALATED LINE ITEM DOLLARS

Project Number [redacted]
Date of Estimate [redacted]
Estimate revision # 00

Escalation Rate 6 Rate 3 57

		Prior		2023		2024		TOTAL	
		Mhrs	DOLLARS	Mhrs	DOLLARS	Mhrs	DOLLARS	Mhrs	DOLLARS
CSTXX CONSTRUCTION	R								
Electrical Construction	L	[redacted]							
General Construction	L								
SCADA / Automation	AL								
Telecom - Field	L								
Construction Reps (Internal)	L								
Support Safety/Tax	L								
Other (specify)	L								
Other (specify)	L								
Other (specify)	L								
LT Total									
Employee Expenses	AL								
Construction Purchased Material	AL								
Outside Construction Vendor	AL								
Sales tax on Const. Vendor									
Vehicles (now in indirects section)	AL								
Insurance services (Outside Vendor)	AL								
Construction Rep (Outside vendor)	AL								
Rents and Leases	BR								
CSTXX Subtotal									
Escalation									
CSTXX Total									
ENRXX TO ENGINEERING/DESIGN									
Project Services/Drafting	L								
T-Line Engineering/Design	L								
D-Street Engineering/Design	L								
Civil Engineering/Design	L								
Substation (T) Engineering/Design	L								
Substation (D) Engineering/Design	L								
Protection & Controls Engineering	L								
Survey Engineering	L								
SCADA / Automation Engineering	L								
Telecom Engineering	L								
Other - specify	L								
Other - specify	L								
LT Total									
Employee Expenses	AL								
Contractor Engineering - T-Lines	AL								
Contractor Engineering - D-Street	AL								
Contractor Engineering - T-Station	AL								
Contractor Engineering - D-Station	AL								
Contractor Engineering - PBC	AL								
Contractor Engineering - Survey	AL								
Contractor Engineering - SCADA / Automation	AL								
Contractor Engineering - Telecom	AL								
Contractor Engineering - Civil	AL								
Contractor Engineering - Specify	AL								
Contractor Engineering - Specify	AL								
Vehicles (now in indirects section)	AL								
ENRXX Subtotal									
Escalation									
ENRXX Total									
LNDXX TO LAND									
Real Estate	L								
Employee Expenses	AL								
Purchase Land	AL								
Easements	AL								
Vehicles (now in indirects section)	AL								
Fees and Payments	BR								
LNDXX Subtotal									
Escalation									
LNDXX Total									
MATXX TO MATERIAL									
Inventories	A								
Outside Services	A								
Freight	A								
Sales Tax Inversions/outside services	B								
Other									
MATXX Subtotal									
Escalation									
MATXX Total									
PRMXX PROJECT MANAGER & SUPPORT									
Project Management (PM)									
Project Planning/Cost (SP)									
Contracts/Purchasing (CP)									
System Planning									
Environmental									
SCS - None									
Legal									
Estimating									
Siting - Exempt Modification									
Asset Management									
Other - Siting/Permits									
Other -									
Other -									
Other -									
LT Total									
Employee Expenses									
Project Support Vendor - PM									
Project Support Vendor - SP									
Project Support Vendor - CP									
Project Support Vendor - System Planning									
Project Support Vendor - Environmental									
Project Support Vendor - SCS - None									
Project Support Vendor - Legal									
Project Support Vendor - Estimating									
Project Support Vendor - Siting - Exempt Modification									
Project Support Vendor - Asset Management									
Project Support Vendor - Other									
Project Support Vendor - Other									
Project Support Vendor - Other									
Project Support Vendor - Other									
Vehicles (now in indirects section)									
Property of CWP tax base (not a Revenue)									
Sales Tax Inversions (not a Revenue)									
Sales Tax Inversions (not a Revenue)									
Fees and Payments - Siting									
Fees and Payments - Other									
PRMXX Subtotal									
Escalation									
PRMXX Total									
REMXX TO REMOVAL									
Engineering/Design									
Internal Construction									
LT Total									
Employee Expenses									
Outside Services									
Contractor Labor									
Vehicles (now in indirects section)									
Rents and Leases									
REMXX Subtotal									
Escalation									
REMXX Total									
TSTXX TO TEST									
Test / Field Engr. Labor (In House)									
Lead Commissioning Engr. (LCE) (Internal)									
Employee Expenses									
Test / Field Engr. Labor (contractor)									
Lead Commissioning Engr. (LCE) (contractor)									
Vehicles (now in indirects section)									
TSTXX Subtotal									
Escalation									
TSTXX Total									
SUBTOTAL PROJECT DIRECT COST									
Risk									
Risk									
Risk Total									
TOTAL PROJECT DIRECT COST (w/risk)									
INDIRECTS									
Non-Productive Time Allocation (INP)									
Payroll Benefits Allocation (IPB) incl NPT									
Gen SVC CO Overhead (ISBM incl NPT									
E&S Allocations (ISB,ISB,ISB)									
ASSS Allocations (ISAS)									
Stores Expense Allocation (IST)									
Lobby Stock									
MOSC (ISM)									
Vehicles (ISM)									
Indirects Subtotal									
TOTAL PROJECT COST Direct & Indirect (excl AFUDC									
AFUDC									
AFUDC (ZX)									
In Service Outlets									
Cumulative ISS									
AFUDC Subtotal									
TOTAL PROJECT COST Baseline Budget									
Contingency									
Contingency									
Other									
Contingency SubTotal									
TOTAL PROJECT COST Approved Funding									
Reimbursables / Customer Contribution									
Reimbursables / Customer Contribution (enter as negative)									
TOTAL PROJECT COST									



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General Report_1

30-Jan-23 14:44

Activity ID	Activity Name	Activity Status	Original Duration	Actual Duration	Remaining Duration	Start	Finish	Total Float	BL Project Start	BL Project Finish	2023	2024	2025

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

[redacted]

Project Title: [redacted]	☐	Prior Constructability Review Performed?
	☐	Program Related Site-Specific Review?
Project Numbers(s): CS00382	**Project Constructability Phase:**	
Date(s) of Constructability Review: 10/27/2022	☒ Conceptual Engineering Design	
Click to enter a date	☐ Preliminary Engineering Design	
	☐ Detailed Engineering Design	
Project Scope Statement: [redacted]		

Department Review/Walkdown Attendees*:

Required [X]	Attended [X]	Department	Name	Required [X]	Attended [X]	Department	Name
☒	☒	Project Management	[redacted]	☒	☒	S/S Engineering	[redacted]
☒	☒	ControlPoint (Engineering Vendor)		☒	☒	P&C Engineering	
☐	☐	Constr. Management		☒	☒	Civil Engineering	
☒	☒	S/S Technical / LCE		☒	☒	Telecom	
☒	☒	Field Engineering		☐	☐	Real Estate	
☒	☒	Electrician		☐	☐	Survey Engineering	
☒	☒	Siting		☐	☐	Cost Estimating	
☒	☒	Construction Representative		☐	☐	Project Services (Outreach)	
☒	☒	SCADA		☐	☐	Material Procurement	

*** Sign-off in the table above for the Detailed Engineering Design Constructability Review indicates that all Action Items/Concerns from prior Constructability Reviews have been mitigated/resolved as documented in this form. Not every department is required to attend walkdowns for every project but should be consulted for project impact considerations**

** Internal Eversource Substation Operations must be included in the review even if external construction resources are planned

Project Manager] certifies that this review was performed to completeness, that all applicable departments were informed of the project and have had opportunity to provide input to this review:

[redacted] 10/27/2022

Name / Signature *Date*

Documents available for use prior to Constructability Review					
[X]	Document	[X]	Document	[X]	Document
☒	Initial Scope -Birdseye site plan -General Arrangement	☐	Preliminary Drawings -Civil Site Drawing -Electrical Drawing -Section Drawings	☒	Prints in hand for marking up -Panel Front/Read View -Control Enclosure Layout -Floor / Wall Plans
☐	Detailed Scope Document	☒	Proposed Schedule	☐	Construction Sequence/Timeline
☒	Previous Notes / Comments / Observations	☐	Major Material / Equipment List	☐	Replace / Reuse of equipment

Action Items and Resolutions:

Item No.	Const. Review Action Item/Concern	Design Resolution/Mitigation:
1		
2		
3		
4		
5		

	Key Review Item Description	N/A or No Concern	Review Notes, Concerns, or Additional Info Needed
A	**Engineering & Asset Management**		
[redacted]			

	Key Review Item Description	N/A or o Concern	Review Notes, Concerns, or Additional Info Needed
[redacted]			

	Key Review Item Description	N/A or No Concern	Review Notes, Concerns, or Additional Info Needed
[redacted]			
	be done?		
B	**Construction**		
[redacted]			

	Key Review Item Description	N/A or No Concern	Review Notes, Concerns, or Additional Info Needed
[redacted]			

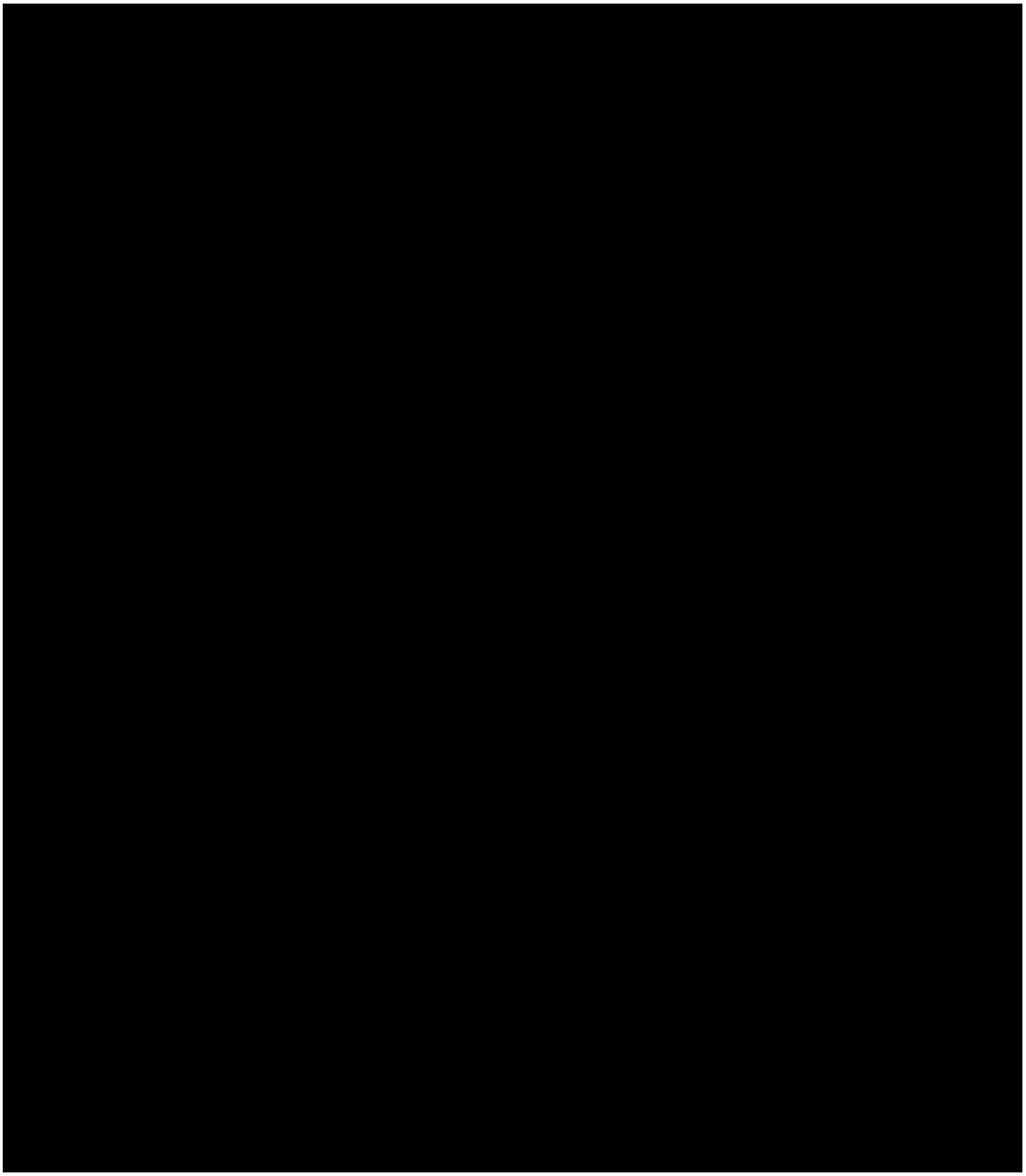
	Key Review Item Description	N/A or No Concern	Review Notes, Concerns, or Additional Info Needed
[redacted]			

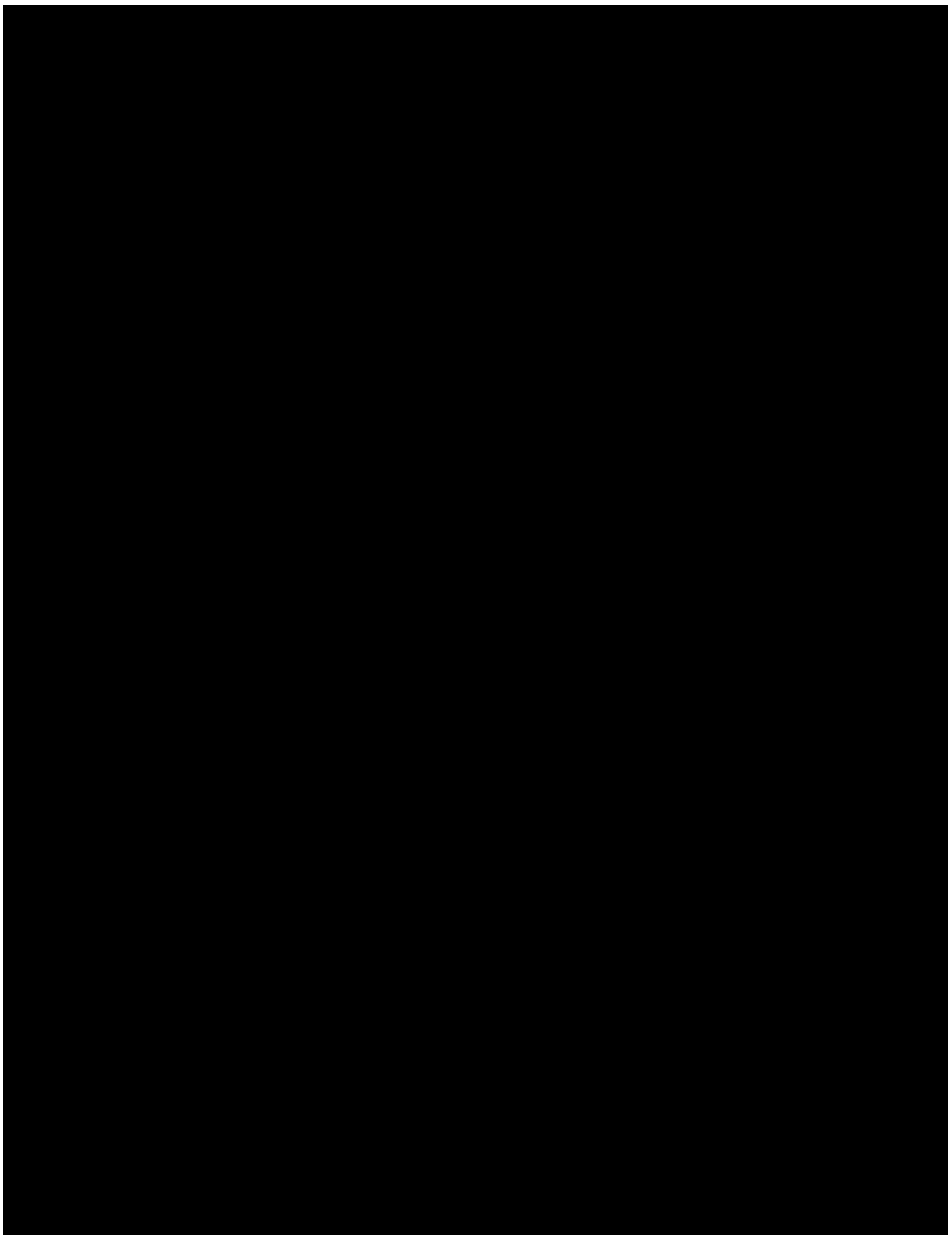
	Key Review Item Description	N/A or No Concern	Review Notes, Concerns, or Additional Info Needed
[redacted]			

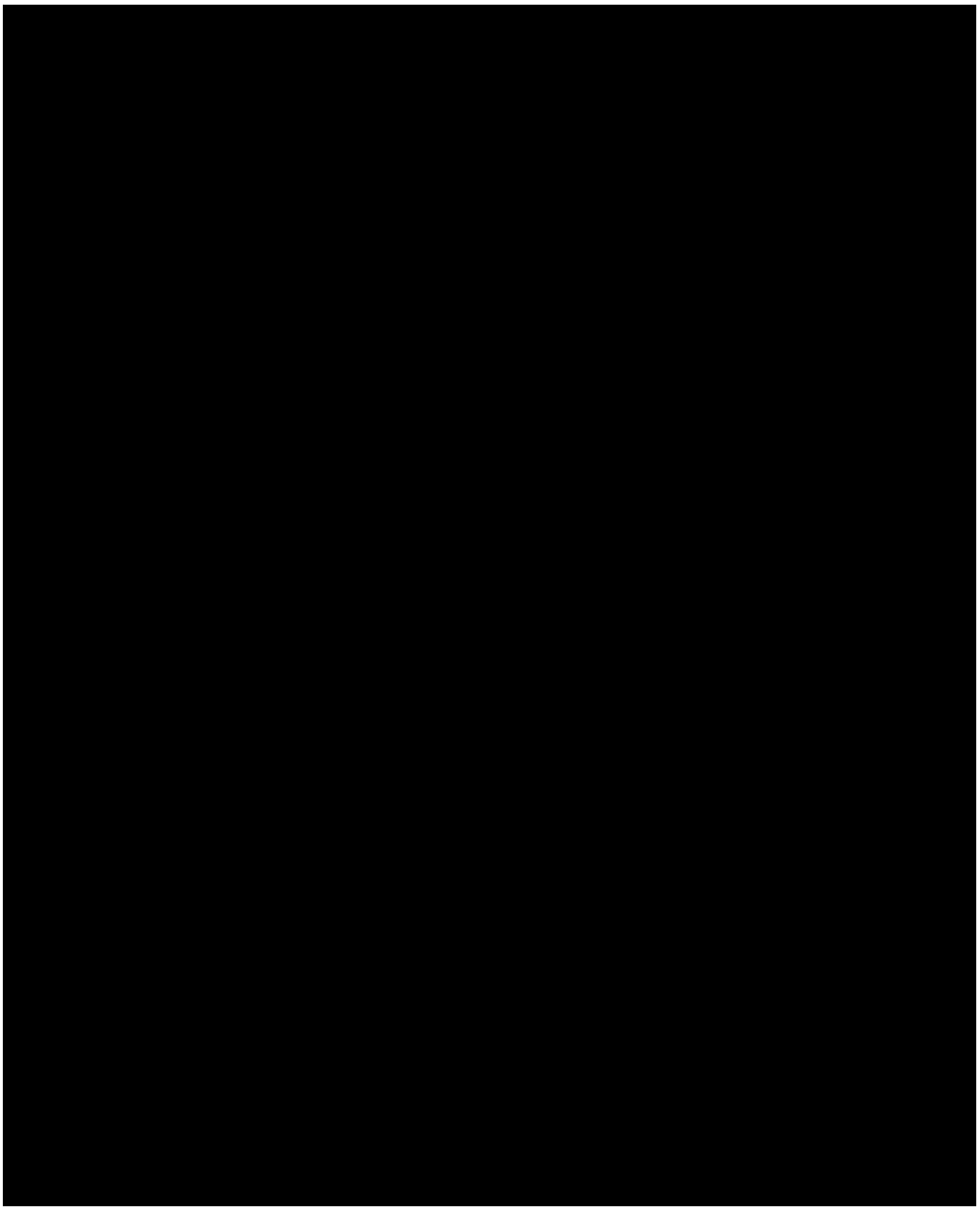
	Key Review Item Description	N/A or No Concern	Review Notes, Concerns, or Additional Info Needed
D	**Siting, Project Services, and ROW T&D Rights & Survey**		
	[redacted]		

	Key Review Item Description	N/A or No Concern	Review Notes, Concerns, or Additional Info Needed
G	**Telecom Engineering**		
	[redacted]		

Photos

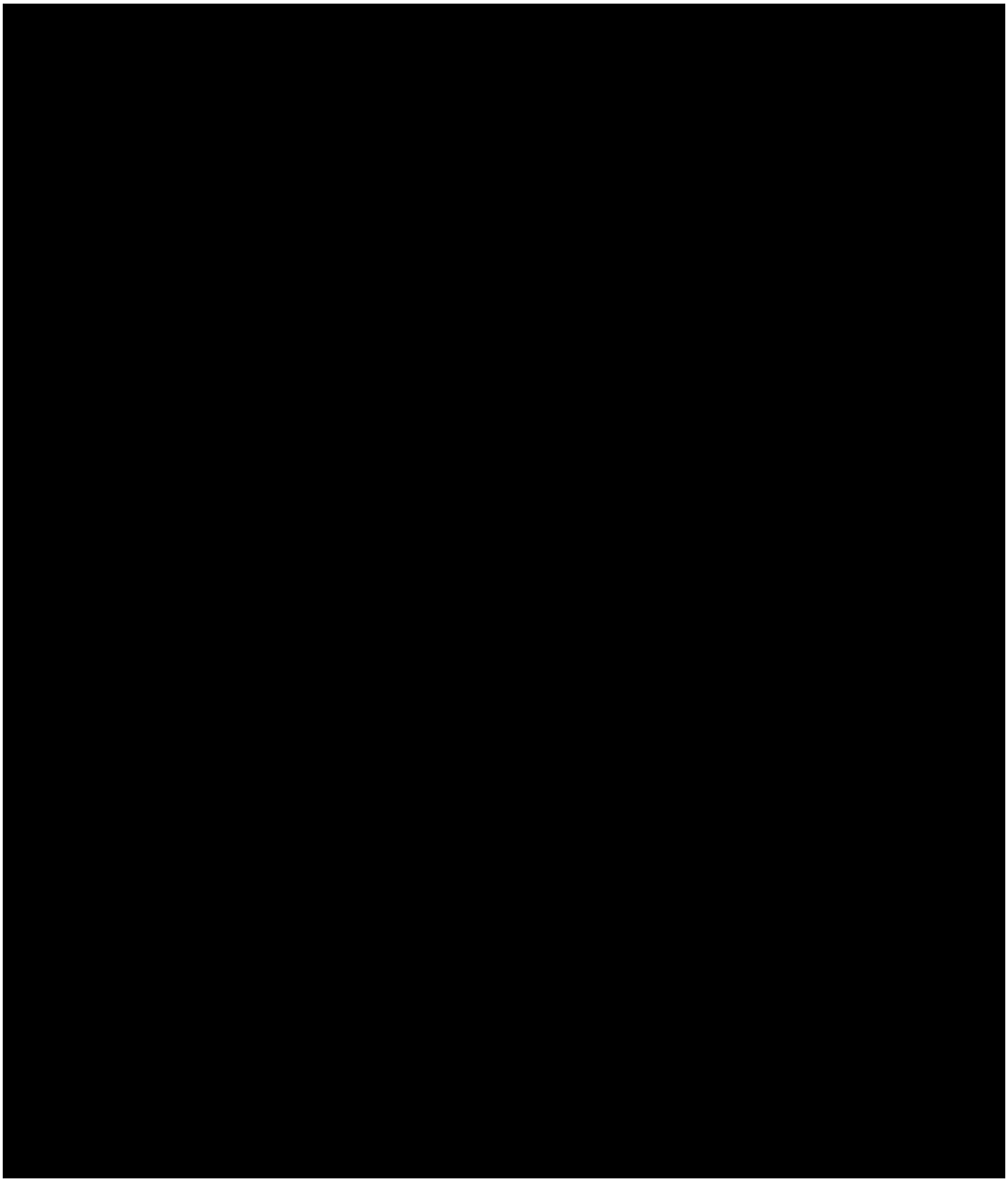


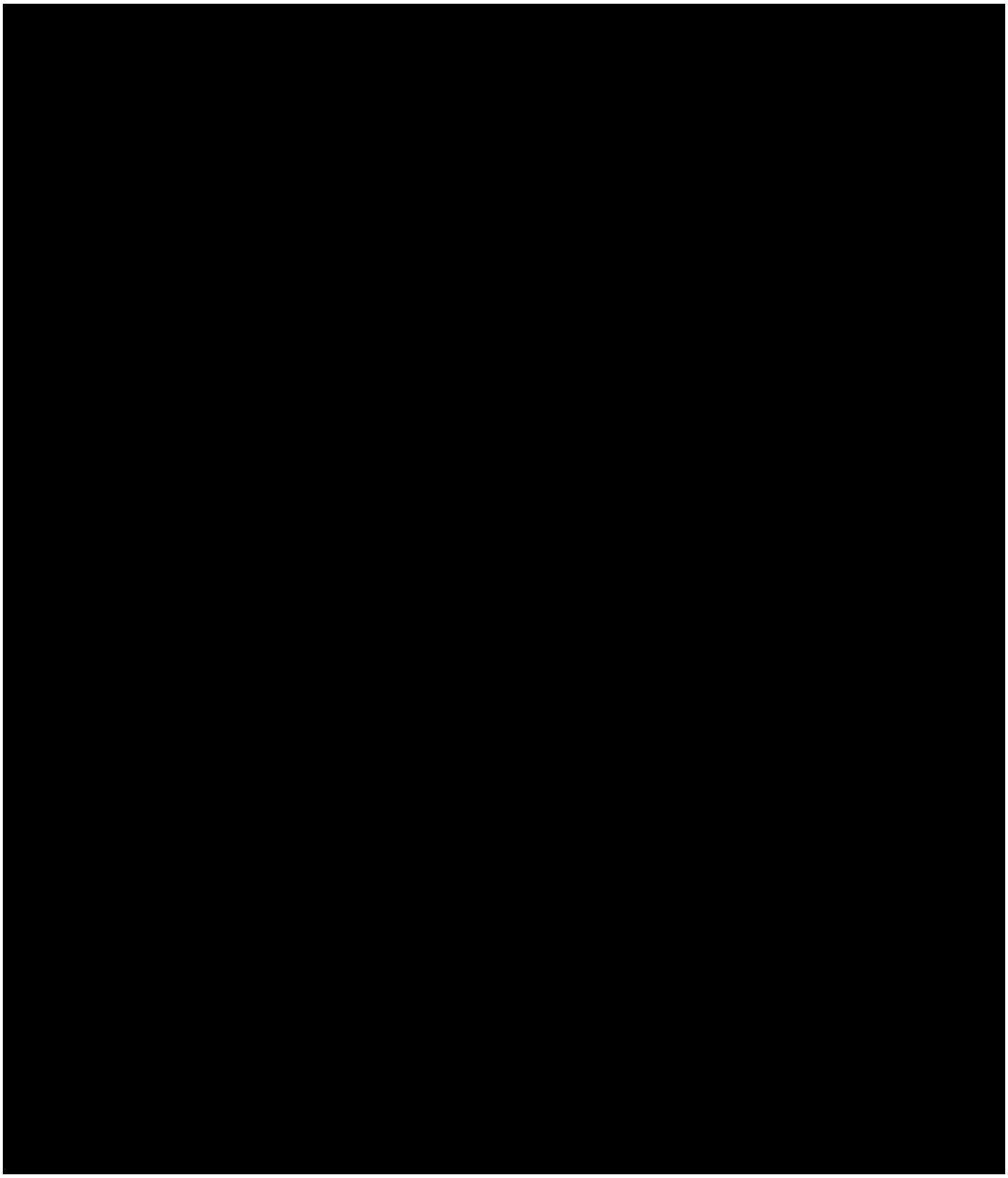




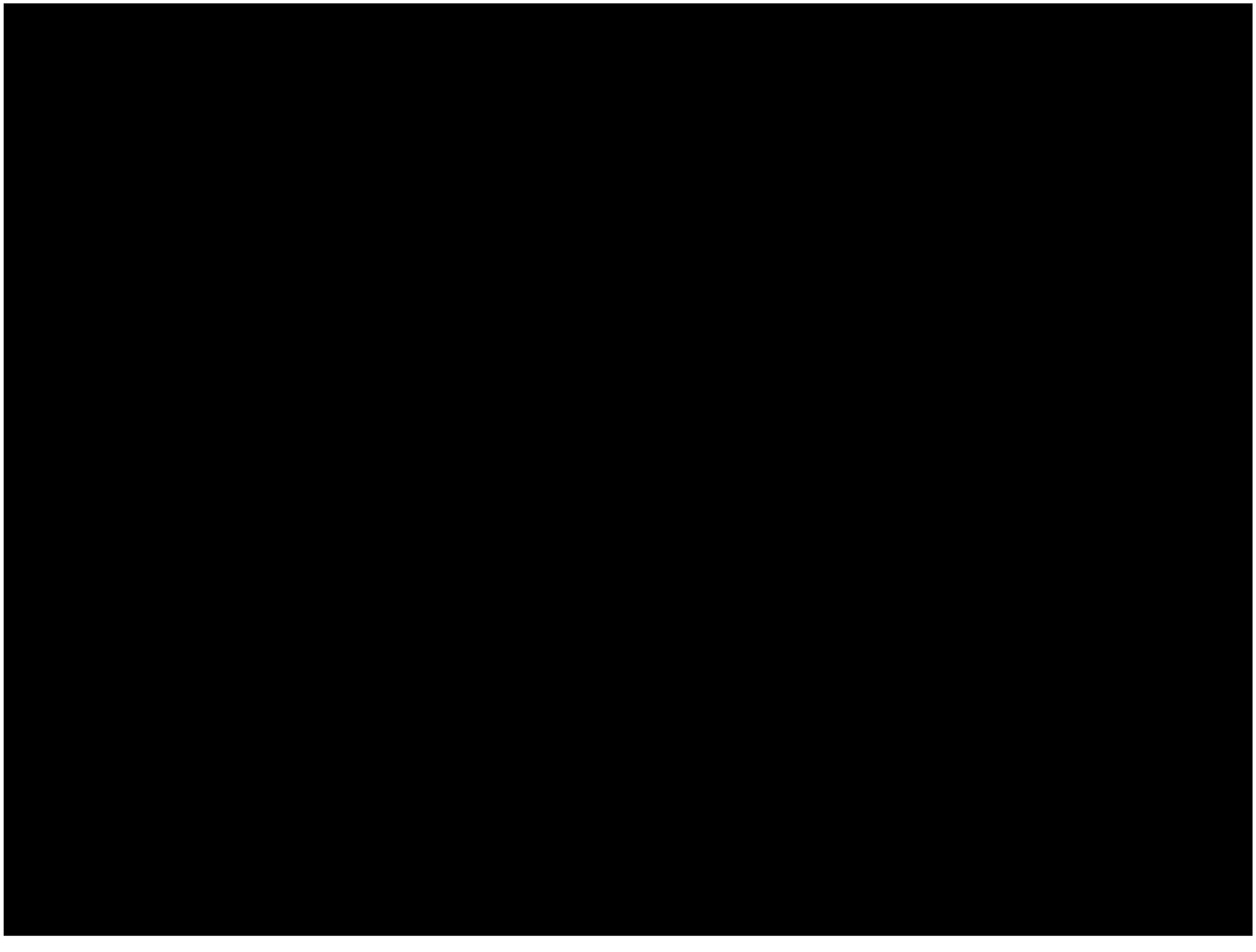












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