



Avista Corp.

1411 East Mission P.O. Box 3727
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Toll Free 800-727-9170

March 6, 2018

Public Utility Commission of Oregon
201 High St SE
Suite 100
Salem, OR 97301

Attention: Filing Center

RE: Application of Avista Corporation

Please find attached an electronic copy of the Company's "Application of Avista Corporation to enter into Addendum No. 3 and the Statement of Work (SOW) to the Master Software License and Services Agreement (MSLSA), by and between Avista and Trove Predictive Data Science, LLC, an affiliate of Avista pursuant to ORS 757.495". This application has been filed with the Commission pursuant to OAR 860-011-0012. Included for filing with the Commission are attachments that we are asking to be treated confidentially under the Public Records Law in accordance with ORS 192.501 and 192.502. This document is stamped CONFIDENTIAL.

Please direct any questions regarding this filing to Jennifer S. Smith at (509) 495-2098.

Sincerely,

A handwritten signature in black ink, which appears to be "Patrick D. Ehrbar", is written over the word "Sincerely,". The signature is fluid and cursive, extending to the right across the page.

Patrick D. Ehrbar
Director of Regulatory Affairs

Enclosure

**BEFORE THE PUBLIC UTILITY COMMISSION
OF OREGON**

IN THE MATTER OF THE APPLICATION)
OF AVISTA CORPORATION, DBA) DOCKET _____
AVISTA UTILITIES, TO ENTER INTO)
MASTER SOFTWARE LICENSE AND)
SERVICES AGREEMENT, WITH AN)
AFFILIATED INTEREST) APPLICATION OF AVISTA CORP.

1 Pursuant to ORS 757.495 and OAR 860-027-0040, Avista Corporation, doing business as
2 Avista Utilities (hereinafter Avista, Company, or Applicant), respectfully requests the Public
3 Utility Commission of Oregon (PUC) provide authorization for Addendum No. 3 and the
4 Statement of Work (SOW) to the Master Software License and Services Agreement (MSLSA), by
5 and between Avista and Trove Predictive Data Science, LLC, an affiliate of Avista pursuant to
6 ORS 757.495. The estimated impact to Oregon customers related to Addendum No. 3 is
7 approximately \$24,000, and for the statement of work the impact is approximately \$4,000.

8 **I. Background**

9 As previously discussed in the Company’s 2012 – 2017 annual Affiliated Interest Reports
10 filed with the PUC, Avista Development, Inc., a wholly-owned subsidiary of Avista, loaned funds
11 to GridGlo, Inc., a predictive data science company based in Del Ray, FL. In addition to customary
12 considerations for the secured loan, Avista Development received certain rights to discounted
13 services from GridGlo, the benefit of which was assigned to Avista Utilities. Avista Utilities and
14 GridGlo subsequently entered into a Master Software License and Services Agreement, effective
15 on June 26, 2013. At that time, GridGlo, Inc. was not affiliated with Avista Utilities.

16 GridGlo was unable to repay its loans when due in March 2014. Avista Development,
17 GridGlo and another secured lender entered into a forbearance and temporary funding agreement

1 for the purpose of exploring mutually satisfactory ways to restructure GridGlo in satisfaction of
2 the debts. The parties agreed to a restructuring of GridGlo such that the lenders, joined by another
3 investor, acquired all of the assets and select liabilities of GridGlo via new limited liability
4 corporation named Trove Predictive Data Analytics, LLC (“Trove”). The GridGlo contract with
5 Avista Utilities was among the assets transferred as of the date the transaction closed, October 28,
6 2014.

7 Trove is a Predictive Data Science business that develops software applications for the
8 utility industry. The foundation of its technology is the application platform, the TROVE Sunstone
9 v 3.0 Platform (“Platform”), which is a predictive data science and analytics platform. It utilizes
10 utility and non-utility data fused with third party data (i.e., demographic, weather, etc) to produce
11 actionable insights into how to improve efficiency in utility operations and customer
12 service. Since the restructuring transaction on October 28, 2014, Avista Development has made
13 staged equity payments and held Class A equity units in Trove equal to 38.8% on a fully diluted
14 basis as of September 30, 2017. The rights to discounted services assigned to Avista Utilities upon
15 the restructuring completed October 28, 2014, included a Statement of Work, signed June 17,
16 2014. That Statement of Work included the development, delivery and integration of a platform
17 related to a load forecasting application.

18 The terms of that Statement of Work included a fixed fee for the integration of the product
19 in the amount of \$300,000. This work was complete, and expensed, during 2014. Additionally,
20 the agreement included payment of annual fees for maintenance and support for 2015 and 2016
21 for \$35,000 per year, and third party data access fees in the amount of \$25,000 for January 1, 2014
22 through June 30, 2015 and July 1, 2015 through December 31, 2016.

1 On October 13, 2016, the Company entered into to an addendum to the Master Software
2 License and Services Agreement (MSLSA), between Avista Corporation and GridGlo, LLC, d/b/a
3 Trove. Under the terms of this addendum, Avista has engaged Trove to upgrade the current
4 platform and provide additional training, software development, software upgrades and data science
5 consulting services. The data science consulting services consisted of software development by
6 Trove Data Scientist to develop algorithms with their platform to analyze our data. Under the terms
7 of the Addendum, Trove configured the ‘Predictive Analytics’ module of TROVE’s Sunstone v 3.0
8 Platform, which included a Customer Segmentation data.

9 As discussed in Section II (g), through Addendum No. 3 and the statement of work Avista
10 requires additional services from Trove and requests Commission approval through this application.

11 **II. Compliance with OAR 860-027-0040 Filing Requirements**

12 **(a) The applicant's exact name and the address of its principal business office:**

13 Avista Corporation
14 1411 E. Mission
15 PO Box 3727
16 Spokane, Washington 99202-2600
17

18 **(b) The name and address of the person authorized, on the utility’s behalf, to receive**
19 **notices, inquiries, and communications regarding the information:**

David J. Meyer, Esq. Chief Counsel for Regulatory and Governmental Affairs Avista Corporation P.O. Box 3727 1411 East Mission Avenue, MSC-27 Spokane, Washington 99220-3727 Phone: (509) 495-4316 David.meyer@avistacorp.com	Patrick Ehrbar Director of Regulatory Affairs Avista Corporation P.O. Box 3727 1411 East Mission Avenue, MSC-27 Spokane, Washington 99220-3727 Phone: (509) 495-8620 Patrick.ehrbar@avistacorp.com
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1 **(c) A statement describing the relationship between the utility and the contracting entity**
2 **as defined by ORS 757.015, ORS 757.490, ORS 759.010, or ORS 759.385:**

3 Avista Development, a wholly-owned subsidiary of Avista Corporation, now holds
4 38.8% of Class A preferred equity units in Trove, 30.5% on a fully diluted basis.¹

5 **(d) The amount, kind, and ratio to total voting securities held, if applicable:**

6 Trove holds no voting securities in Avista Corp. or any of its affiliates. Avista Corp.,
7 via its subsidiary Avista Development, holds 38.8% of Class A preferred equity units in
8 Trove.

9 **(e) A list of all officers and directors of the affiliated interest who are also officers or**
10 **directors of the applicant:**

11 The lone Avista Development member of the three-member Trove board is Ed Schlect,
12 Avista Corp. Vice President and Chief Strategy Officer.

13 **(f) The pecuniary interest, directly or indirectly, of any officer or director who is a party**
14 **to the contract:**

15 There are no pecuniary interests, directly or indirectly, of any officer or director who
16 is a party to the contract.

17 **(g) A description of the goods or services to be provided, the cost incurred in providing**
18 **each of the goods or services, the market value of the goods or services if different from**
19 **the costs, and the method or methods proposed for pricing those goods or services:**

20 First, the Company also entered into an addendum of the MSLSA. Under the terms of
21 Addendum No. 3, Avista has engaged Trove to provide maintenance and support services
22 on the TROVE Sunstone v 3.0 Platform, third party data access and predictive Data Science

¹ Ownership percentages reported as of 9/30/17.

1 as a Service (DSaaS). The DSaaS will consist of coding and development by a Trove Data
2 Scientist to develop algorithms with the Platform to analyze and segment Avista's data and
3 provide predictive analytics to generate operational efficiencies. Under the terms of the
4 Addendum, Trove will configure the 'Predictive Analytics' module of the Platform, which
5 includes Customer Segmentation data. The rate card for DSaaS from Trove is \$120/hr for
6 a not to exceed amount of \$260,000 (system).

7 Second, the Company entered into a statement of work ("SOW") to the MSLSA to
8 upgrade the current Trove Platform. This SOW which includes software upgrades and
9 additional development, as well as training on the Platform. With this upgrade, the
10 Company will have access to third party data on non-Avista customers within and
11 bordering the Company's service territory. On a system basis, \$20,000 for the Platform
12 upgrade will be charged to capital, while the \$23,000 training and prospect data will be
13 charged to operating expense.

14 **(h) An estimate of the amount the utility will pay annually for the goods or services and**
15 **the accounts in which it will record the charges:**

16 The professional services to be provided by TROVE under Addendum No. 3 are set at
17 a rate of \$120 per hour, and will not exceed an annual cost of \$260,000. Oregon's
18 allocated portion totals approximately \$24,000.² The O&M costs including the
19 maintenance and support costs and DSaaS will be charged to FERC account 935000,
20 Maintenance of General plant (\$235,000 out of the total \$260,000), while third party data

² This allocation assumes that use cases undertaken in 2018 benefit all states and fuels. However, the actual amount charged to Oregon will be based on the appropriate allocation for 'common' use cases and direct allocation for Oregon specific use cases.

1 access fees will be charged to account 923000, Outside Services Employed (\$25,000 out
2 of the total \$260,000).

3 The \$20,000 (system) cost for the SOW Platform upgrade being implemented in 2018
4 will be charged to FERC account 107600. Oregon's allocated portion totals \$1,845. An
5 additional amount of \$15,000 (system) for third party prospect data and \$8,000 (system)
6 training and will be charged to FERC accounts 935000 and 926100 respectively. Oregon's
7 allocated portion totals \$2,122.

8 **(i) The reasons, in detail, relied upon by the utility for procuring the proposed goods or**
9 **services from the affiliate and benefits, if any, utility customers and the general public**
10 **will derive from the provision of goods or services:**

11 Avista's interest in the use of predictive data science is to better assist in the
12 Company's continuing efforts to drive operational efficiencies, optimize costs, and
13 improve customer satisfaction. The multi-purpose software application capabilities of the
14 TROVE Sunstone v 3.0 Platform, Trove's predictive DSaaS³ and technical support services
15 serve as a single integrated solution and was chosen by Avista in 2013, to help with its
16 predictive data science initiatives.

17 Trove is a predictive data science business that develops software applications for
18 the utility industry. The foundation of its technology is the application platform "TROVE
19 Sunstone v 3.0", which is a predictive data science and analytics platform that combines
20 third party data as well as intellectual property developed by Trove data scientists enriched
21 by other engagements across the utility industry. The Platform utilizes utility and non-

³ Predictive DSaaS is a service whereby clients have access to industry expert data science professionals to help with developing actionable insights in the areas of utility operational efficiency and improved customer satisfaction.

1 utility data fused with third party data (i.e., demographic, weather, consumer behavior,
2 consumer preferences, etc.) to produce actionable insights into how to improve efficiency
3 in utility operations and enhanced customer service.

4 Avista has combined its utility data with TROVE's third party data, which
5 incorporates other information such as demographics, housing characteristics including
6 where possible, space and water heating fuel source, etc. to produce actionable intelligence.
7 With actionable intelligence Avista can refine customer outreach of programs tailored to
8 customers' specific circumstances, make data-driven enhancements to existing programs
9 and explore potential customer programs and products.

10 Several examples of recent use cases utilizing this Platform include: 1) identifying
11 limited income customers within Avista's service territory who qualify for energy
12 assistance, efficiency programs or funding to ensure that public purpose funding
13 mechanisms are right-sized for the market potential; 2) identifying electric to natural gas
14 conversion customers who are on natural gas mains scored by customers' propensity to
15 convert; 3) identifying customers most likely to subscribe to paperless billing to reduce
16 operating costs (e.g. bill creation, postage and handling); 4) identifying customers with
17 write-offs who could have qualified for low income or rate assistance programs with the
18 intent to reduce operating costs of write-offs and inform future policy for programs such as
19 Low Income Rate Assistance and inform improvements to community action agency
20 program administration; 5) associating customers to the nearest weather station and
21 providing weather forecasts compared with 30-year norms to notify customers of extended
22 extreme weather events specific to them to reduce high bill calls to the contact center (i.e.

1 reduced operating expense) while educating customers on home heating impacts to bills.
2 Benefits to customers will increase as more use cases are performed.

3 The Company's data science experience and use of the Platform as well as Trove's
4 DSaaS, as discussed in "Section I. Background", ramped up during 2017 as more use cases
5 were completed and customer benefits tested. While predictive analytics as a science is
6 relatively new within the utility industry and to Avista as whole, Avista's experience over
7 this past year has proven to be highly valuable to understanding customers. While initially
8 much emphasis was placed on customers and segmentation, the Company intends to expand
9 data science to other areas. Some examples of other areas includes 1) asset management to
10 analyze asset condition and failures for indications of impending failure to understand signs
11 of deterioration and better forecast resources for necessary maintenance; 2) supply chain to
12 optimize contracting to decrease poor value contracts, increase insights into best practices
13 and optimize time involved with issuing and managing Requests for Proposals/Requests for
14 Information/Requests for Qualifications; and 3) supply chain to optimize inventory
15 management to understand inventory levels, predict when products need to be purchased to
16 allow for optimal lead time and reduce costs for expedited shipping due to last minute
17 purchases. In the end, Avista continues to use Trove and seeks to continue that relationship
18 through the SOM and Addendum No. 3 included in this filing because the products have
19 been successful, and because the backbone (Platform) is already in place.

20 **(j) A description of the procurement process and the reasons, in pertinent detail**
21 **appropriate to the complexity of the procurement, relied upon by the utility for**
22 **procuring the proposed goods or services without a competitive procurement process,**
23 **if such a process is not used:**

1 The software application capabilities of the Platform and Trove’s DSaaS, operating
2 as a single integrated solution, does not otherwise exist in the commercial market.
3 Therefore, any alternatives considered at that time would have been comprised of a
4 combination of several different products supplemented with professional services.

5 One of the products Avista analyzed in 2013 was Data Raker. The Data Raker
6 application is sold in a software-as-a-service SaaS model.⁴ Data Raker, however, does not
7 include an overall multi-purpose platform like the TROVE Sunstone v 3.0 Platform.
8 Therefore, Data Raker is a single purpose application only, with higher O&M costs and
9 annual recurring maintenance fees. With Trove (unlike Data Raker), the Platform include
10 solvers for revenue assurance (i.e. improving detection of non-technical losses from energy
11 theft to faulty meters), customer engagement, portfolio optimization, distributed energy
12 resources forecasting, grid reliability optimization, integrated load forecasting and work
13 optimization. Avista can purchase additional solvers which can be customized through
14 Trove’s DSaaS resulting in less O&M costs compared with alternatives in the market or
15 Avista having to develop each of these from scratch. Purchases of additional Solvers will
16 be contracted separately but covered by the not to exceed \$200,000 DSaaS included in
17 Addendum No. 3.

18 **(k) Transfer prices in contracts or agreements for the procurement of goods or services**
19 **under competitive procurement shall be presumed to be the market value, subject to**
20 **evaluation of the procurement process:**

⁴ Software as a Service (SaaS) is a software distribution model in which applications are hosted by a vendor or service provider and made available to customers over a network, typically the Internet.

1 During negotiations, we were able to leverage reduced pricing for multiple
2 applications, resulting in a price point that we believe is below market value. The Company
3 continues to evaluate any incremental procurement of goods or services at market value
4 under competitive procurement subject to evaluation.

5 **(l) A copy of the proposed contract or agreement between the utility and the contracting**
6 **entity:**

7 Addendum No. 3 by and between Avista Corporation and Trove Predictive Data
8 Science, LLC, is included as Attachment A. The SOW to the MSLSA by and between
9 Avista Corporate and TROVE Predictive Data Science, LLC, is included as Attachment B.

10 **(m) Copies of all resolutions of directors authorizing the proposed transactions and, if**
11 **stockholders' approval has been obtained, copies of the resolutions approved by the**
12 **stockholders:**

13 Authorization of Addendum No. 3 between Avista Utilities and Trove Predictive
14 Data Science, LLC, and the SOW to the MSLSA did not require approval by the
15 Companies' Boards of Directors.

16 CONFIDENTIALITY REQUEST

17 In accordance with ORS 192.501 and 192.502, Avista Corporation requests
18 confidential treatment of the Details of Transaction provided in Attachments A and B.
19 These attachments are marked "Confidential".

20
21 WHEREFORE, Avista Corp. respectfully requests the Commission issue an order
22 authorizing approval of Addendum No. 3 and the Statement of Work to the Master Software

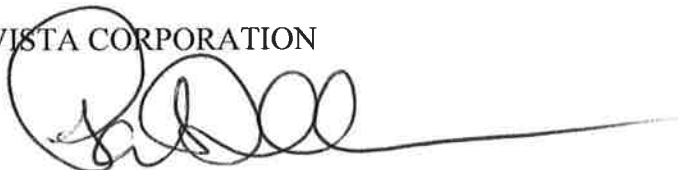
1 License and Services Agreement, by and between Avista and Trove Predictive Data Science, LLC,
2 as described in this application, pursuant to the provisions of ORS 757.495 and OAR 860-027-
3 0040.

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Dated at Spokane, Washington this 6th day of March 2018.

Respectfully submitted,

AVISTA CORPORATION

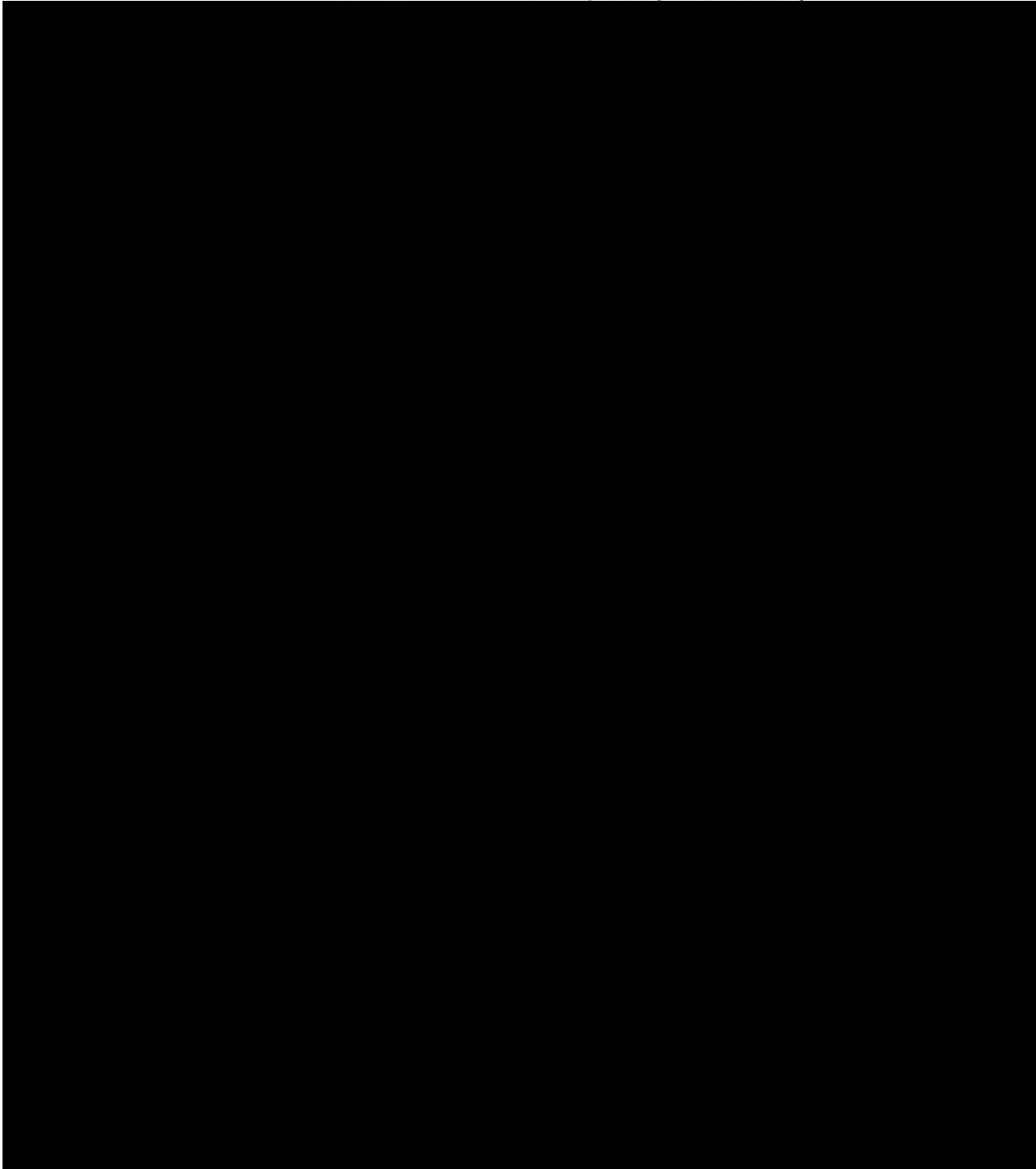
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Patrick D. Ehrbar
Director of Regulatory Affairs

Avista Corporation
East 1411 Mission Ave.
Spokane, WA 99202



Addendum No. 3
to
Avista Contract No. R-39421
Master Software License and Services Agreement
between
Avista Corporation (“Avista”)
and
TROVE Predictive Data Science, LLC (“Contractor”)



Addendum No. 3
Avista Contract No. R-39421

Avista Corporation
East 1411 Mission Ave.
Spokane, WA 99202

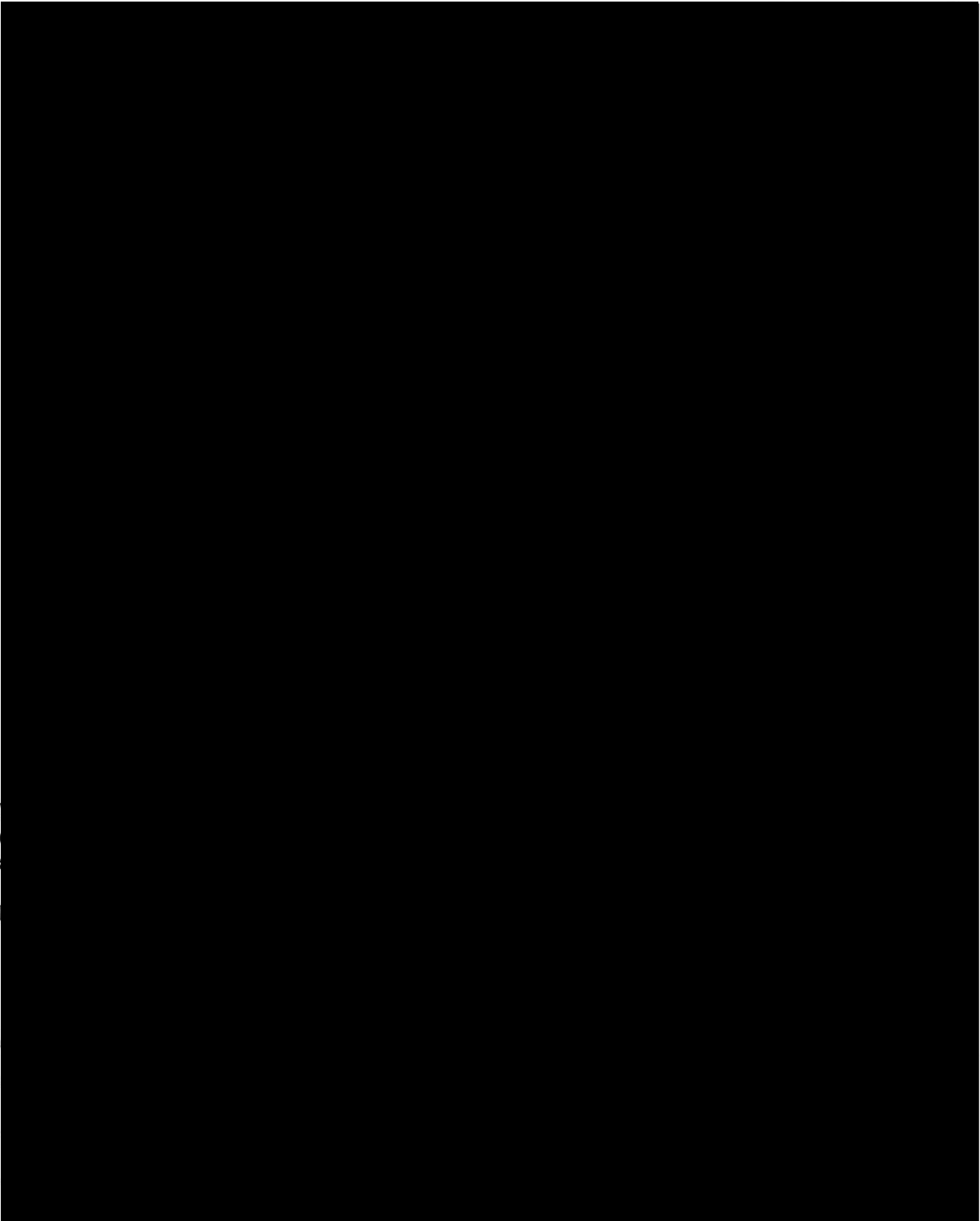
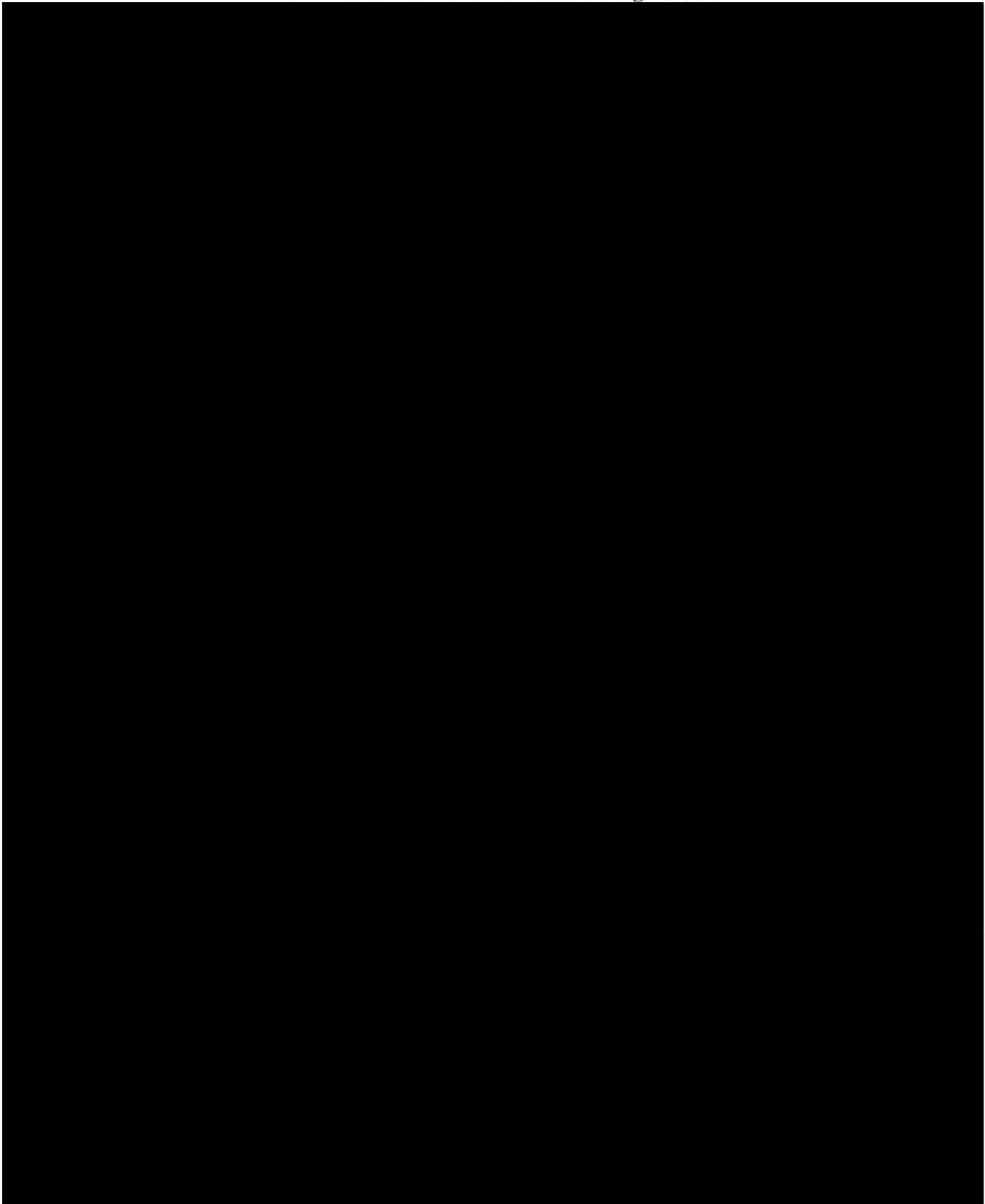
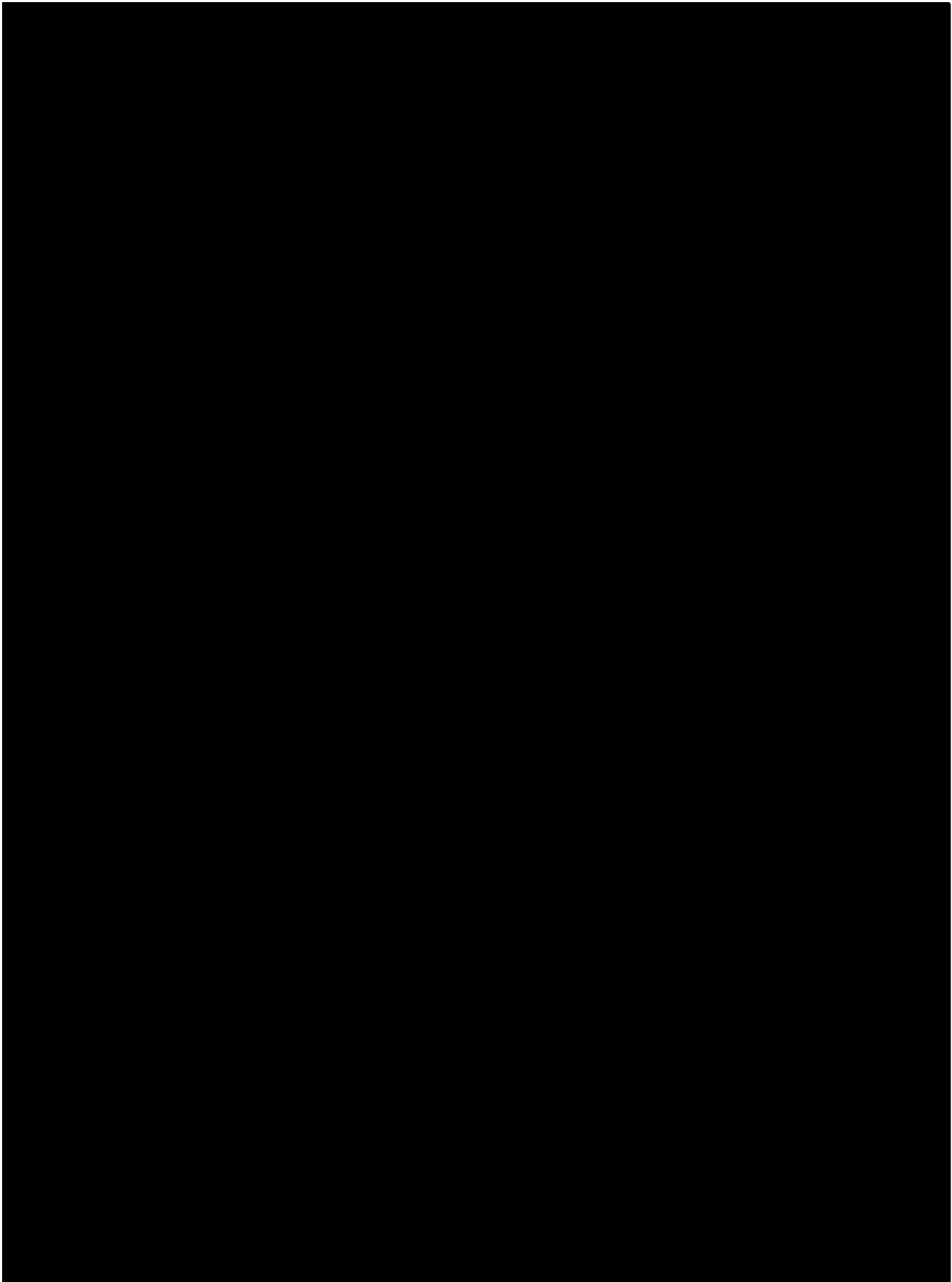
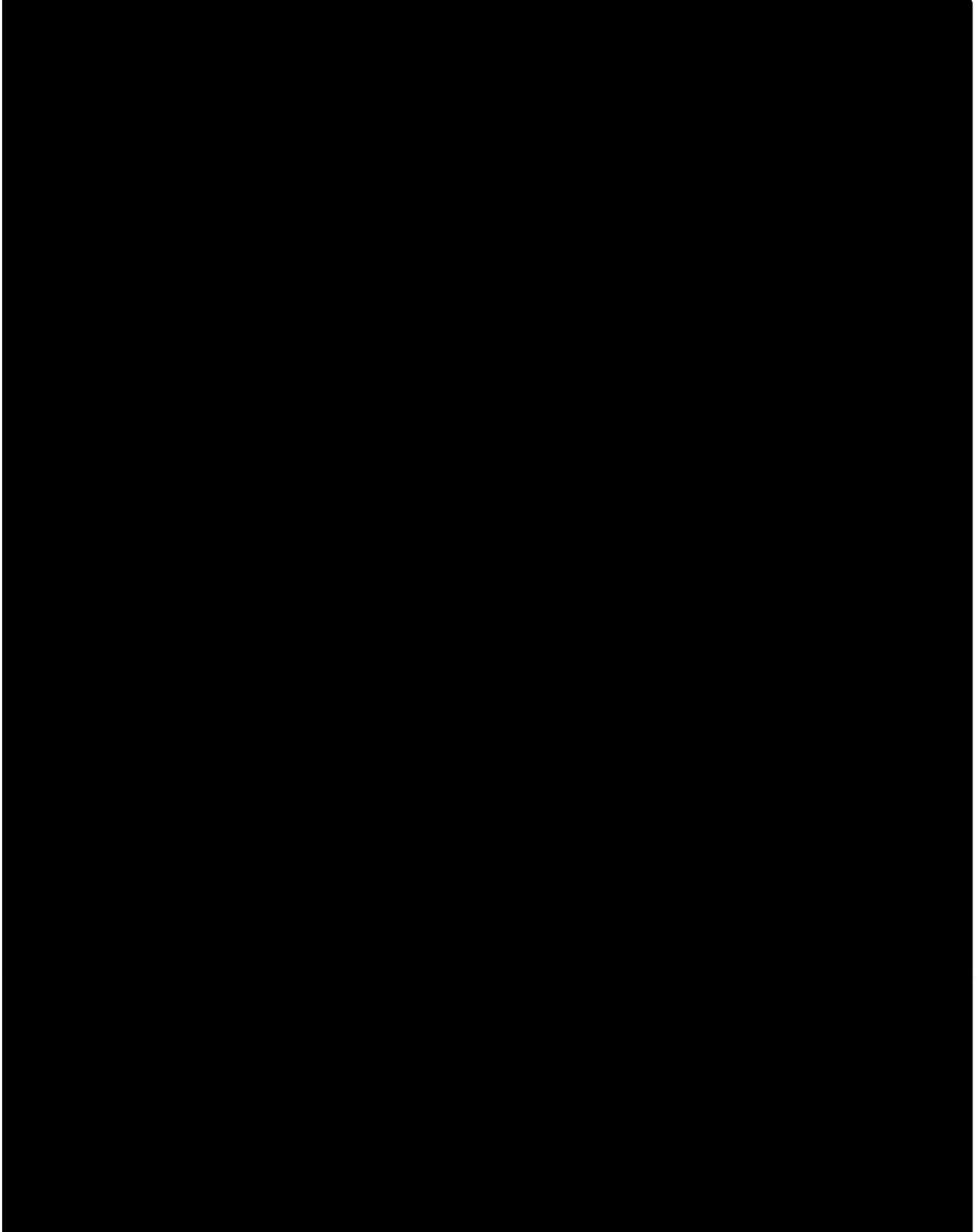


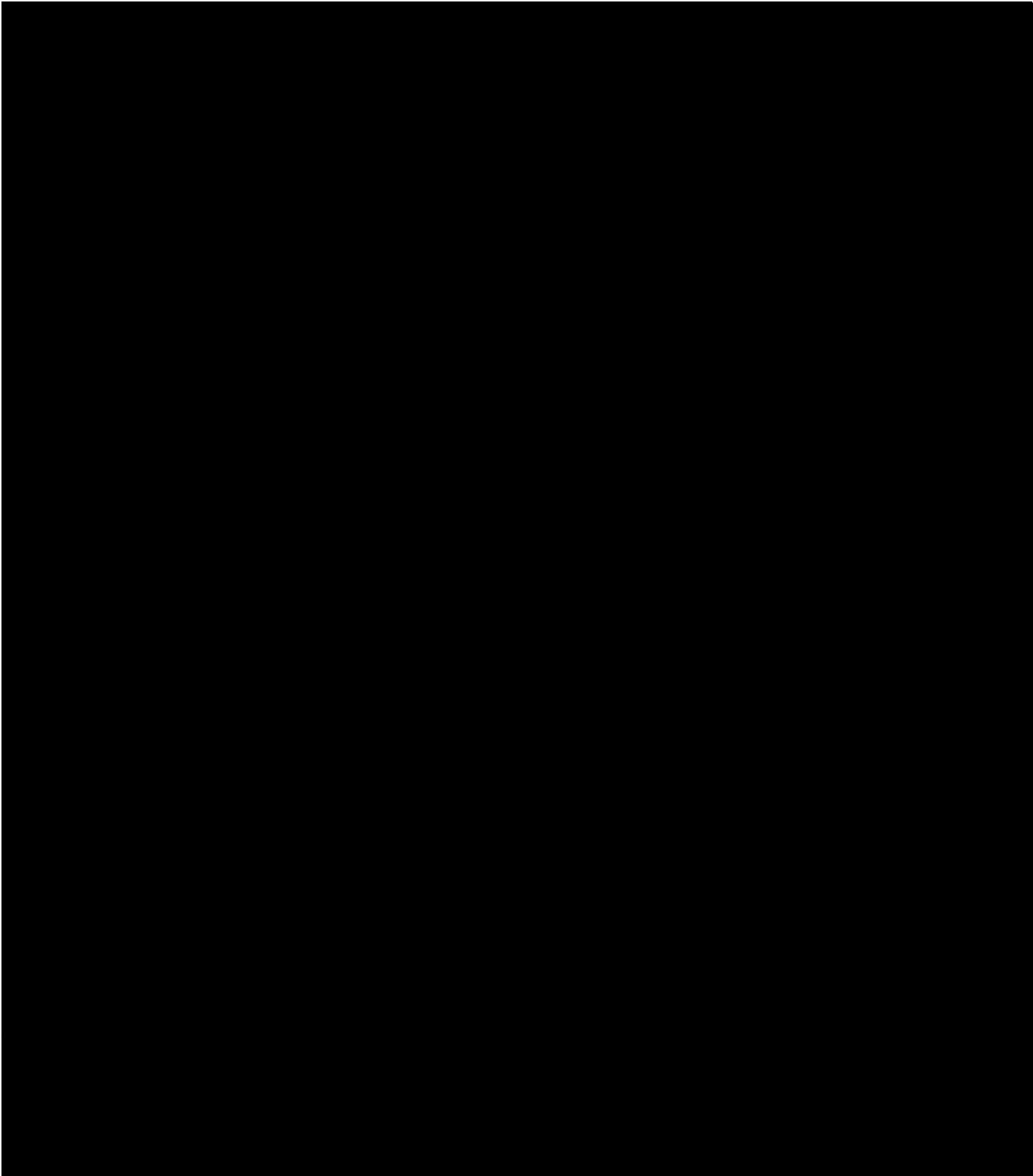
Exhibit A
To
Master Software License and Services Agreement

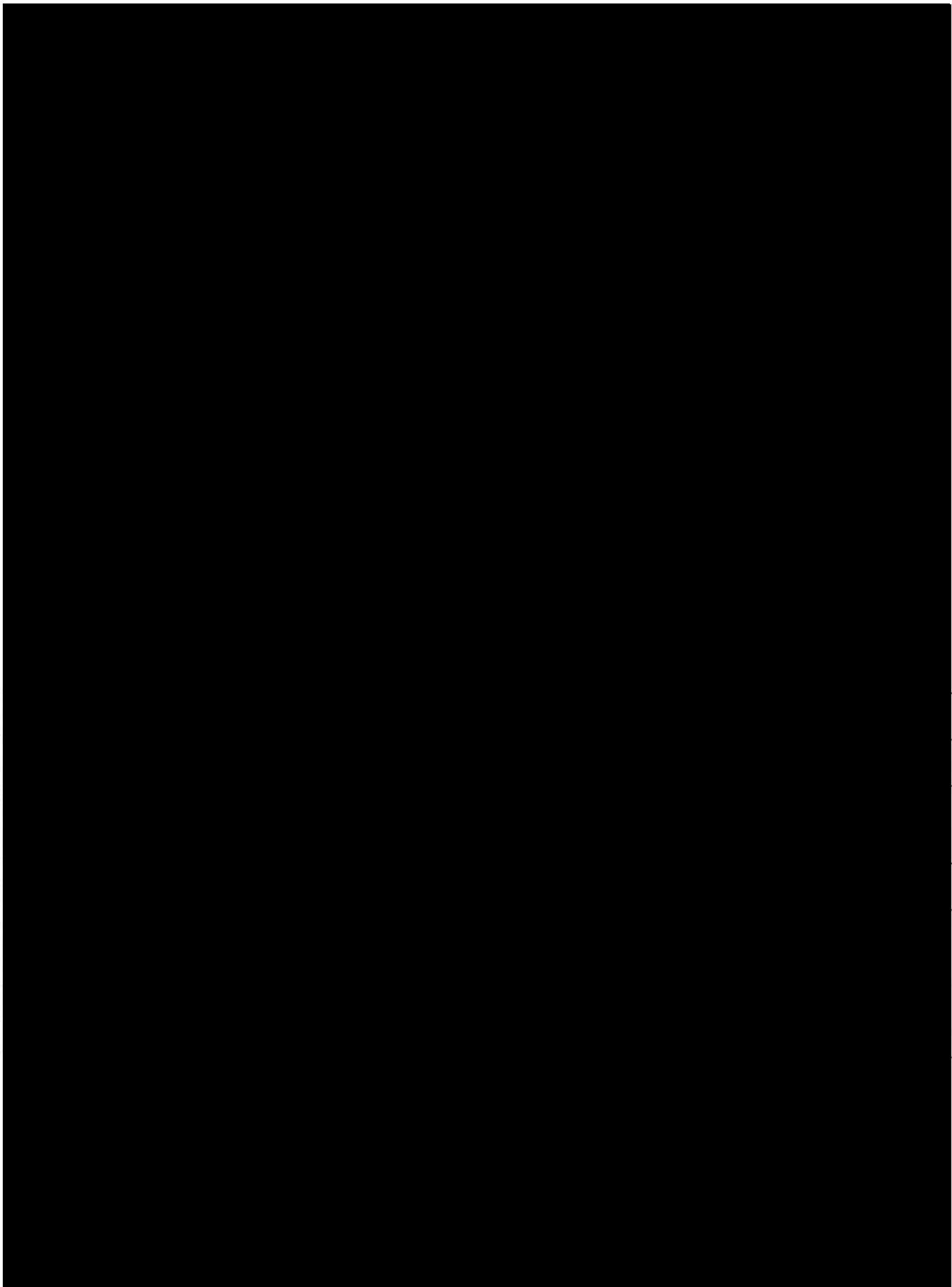


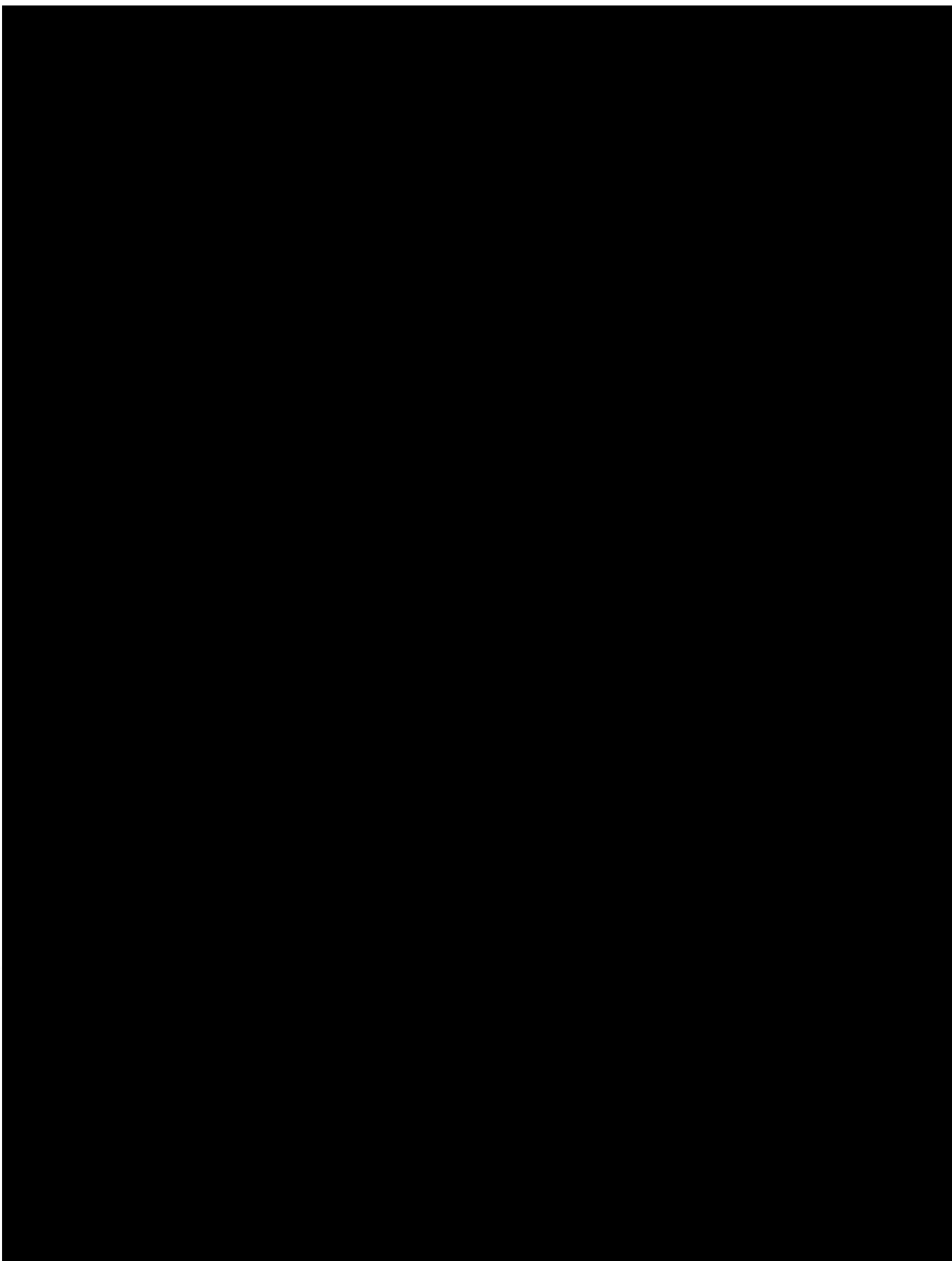


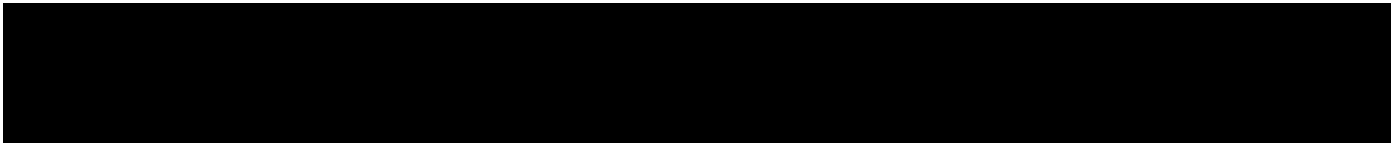








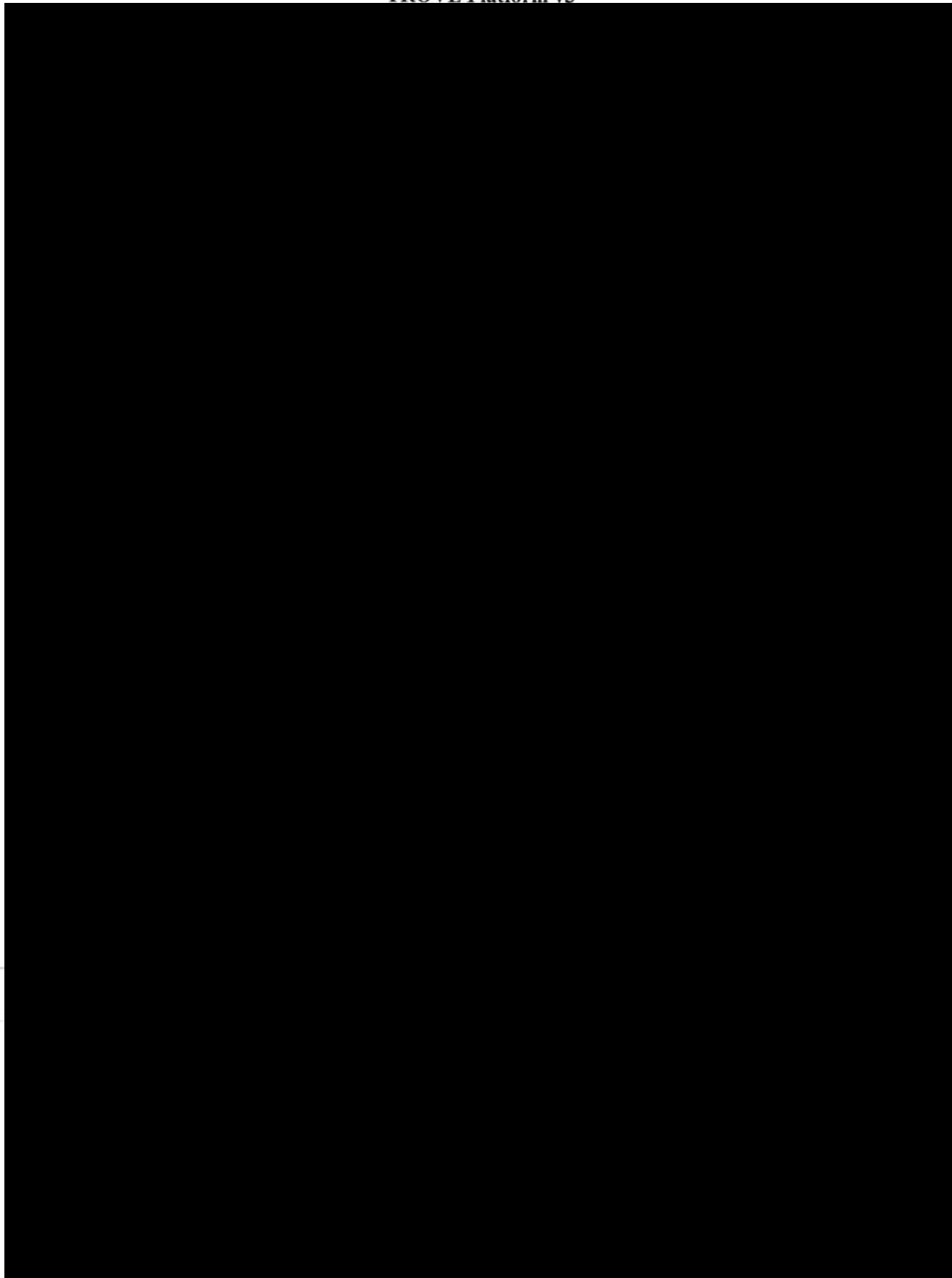


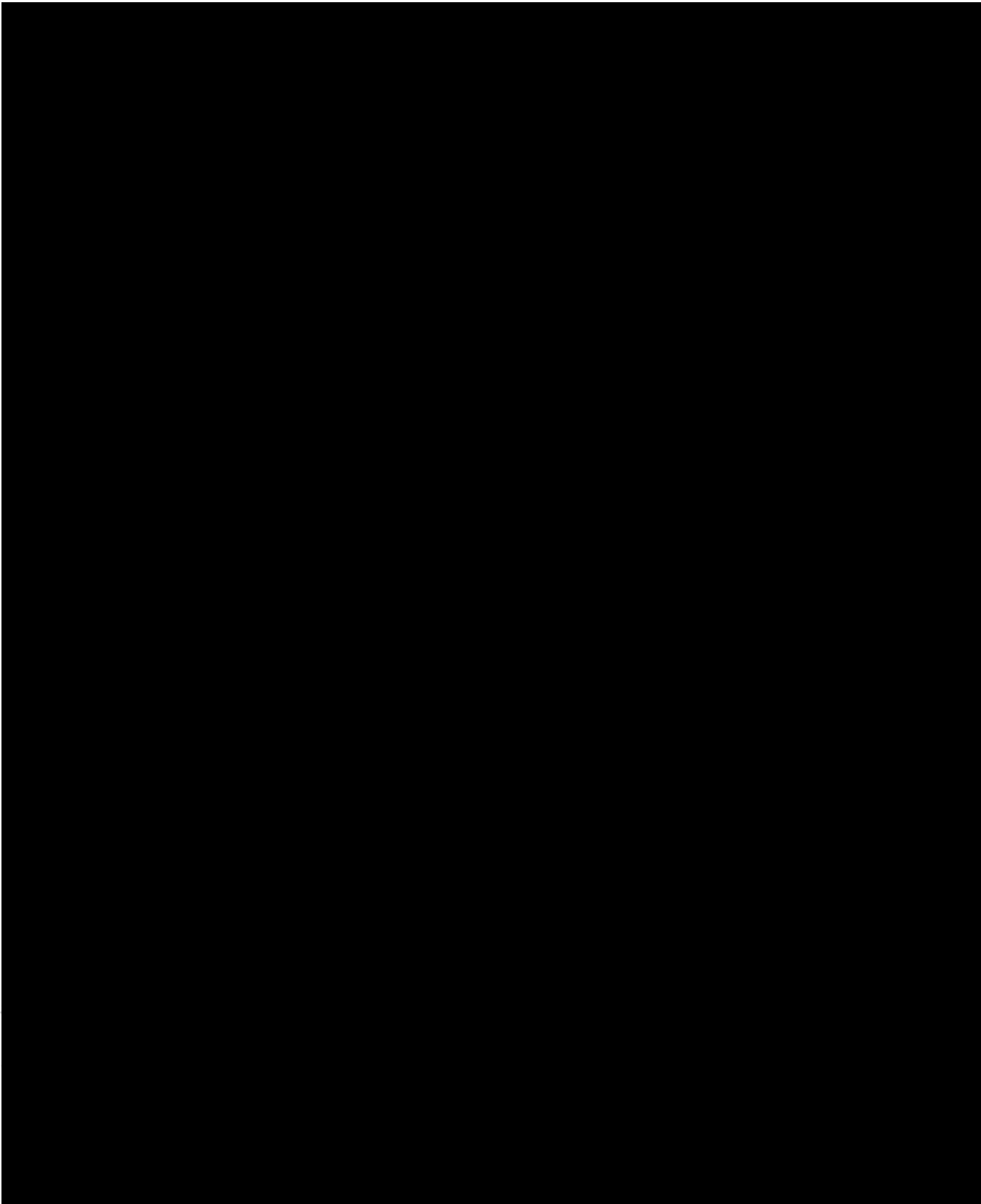


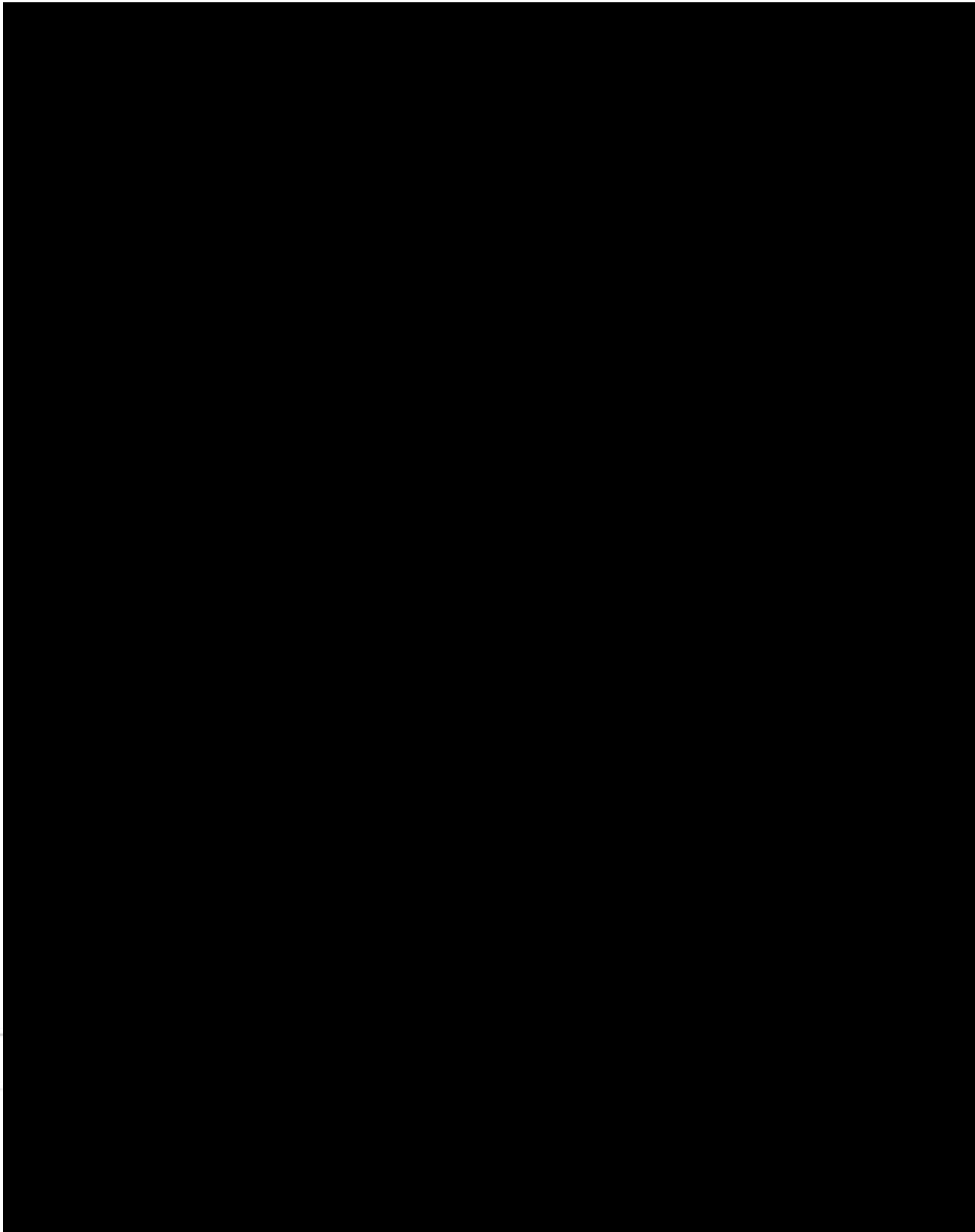
END OF SERVICE LEVEL AGREEMENT

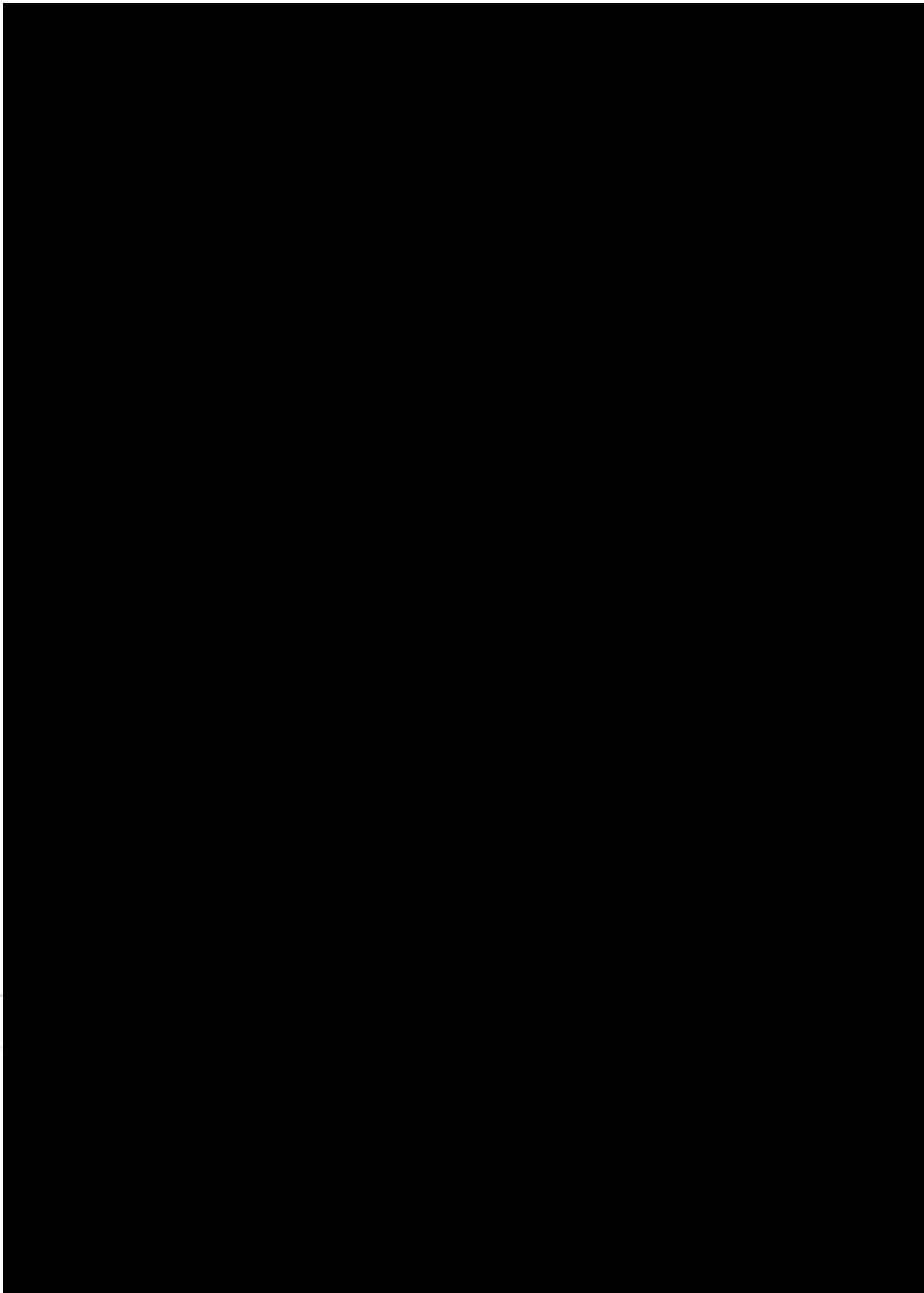


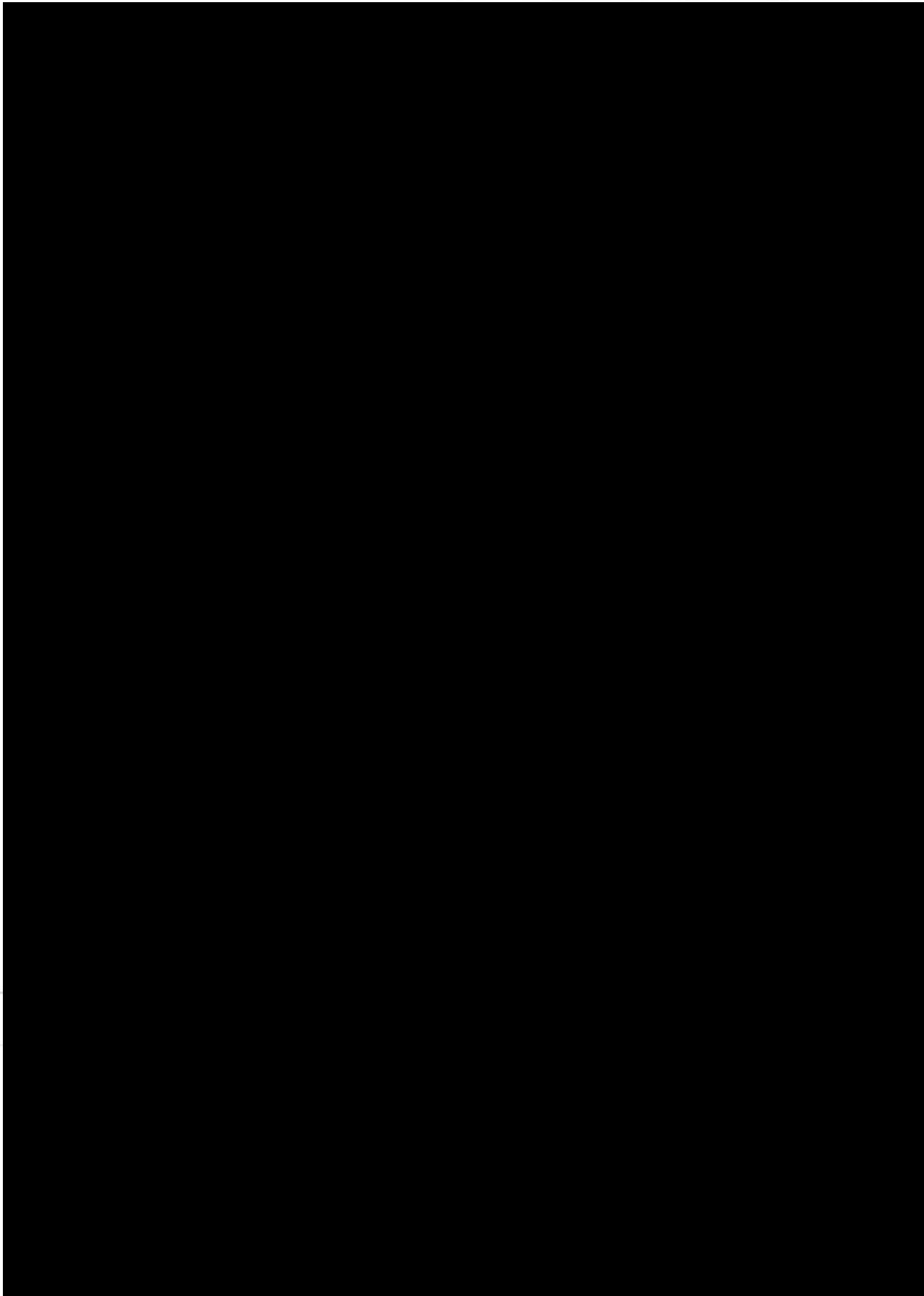
TROVE Platform v3

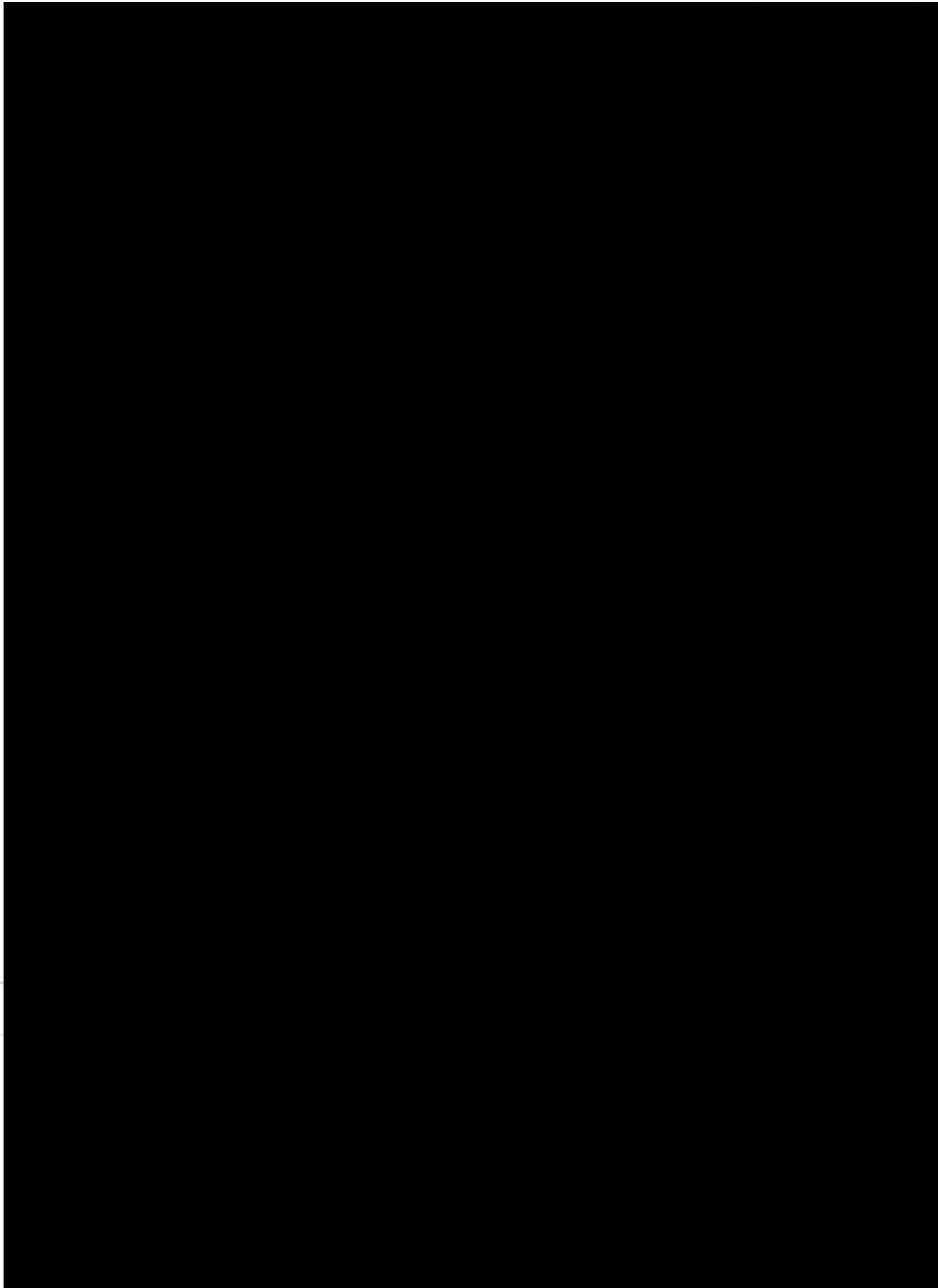


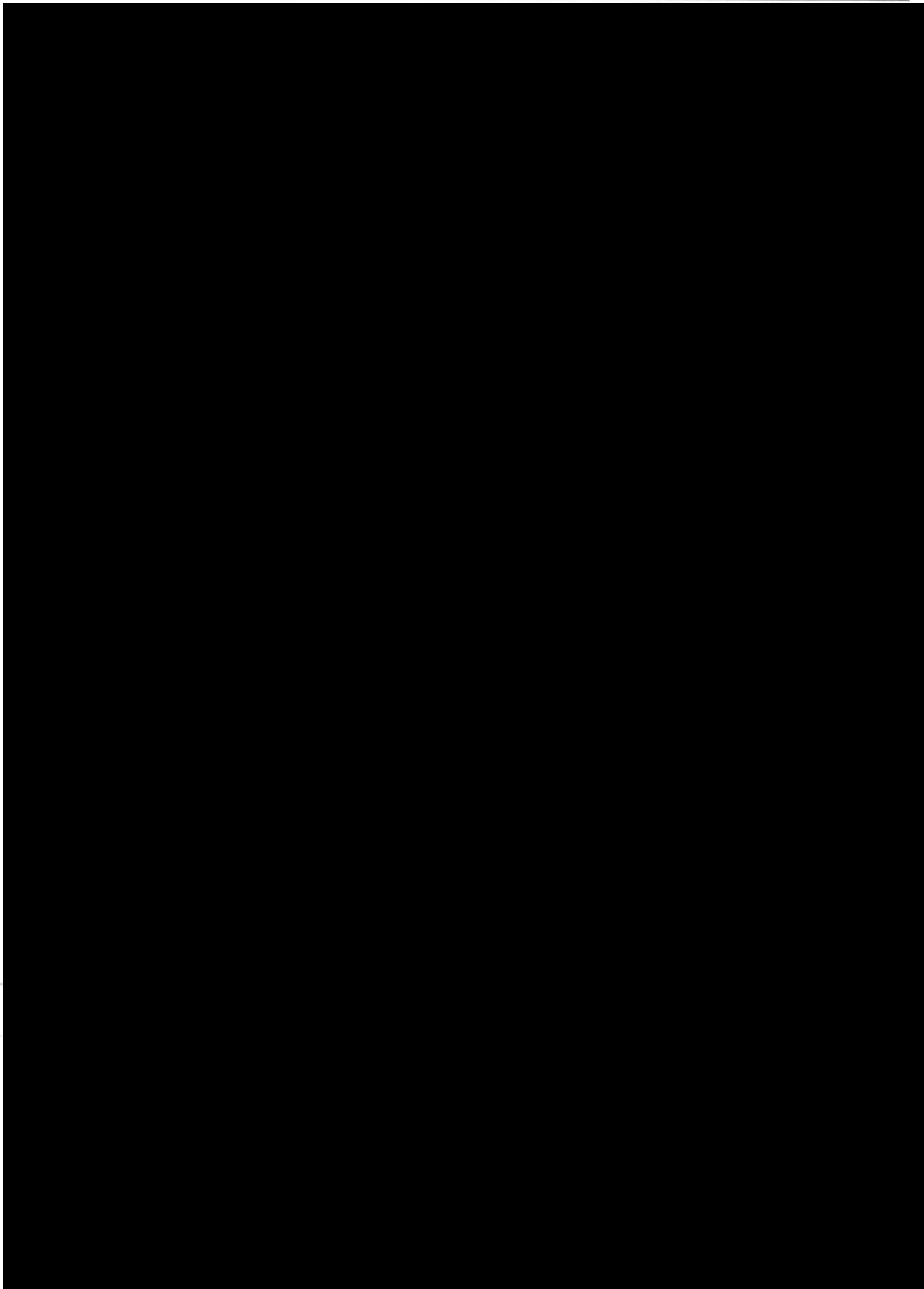


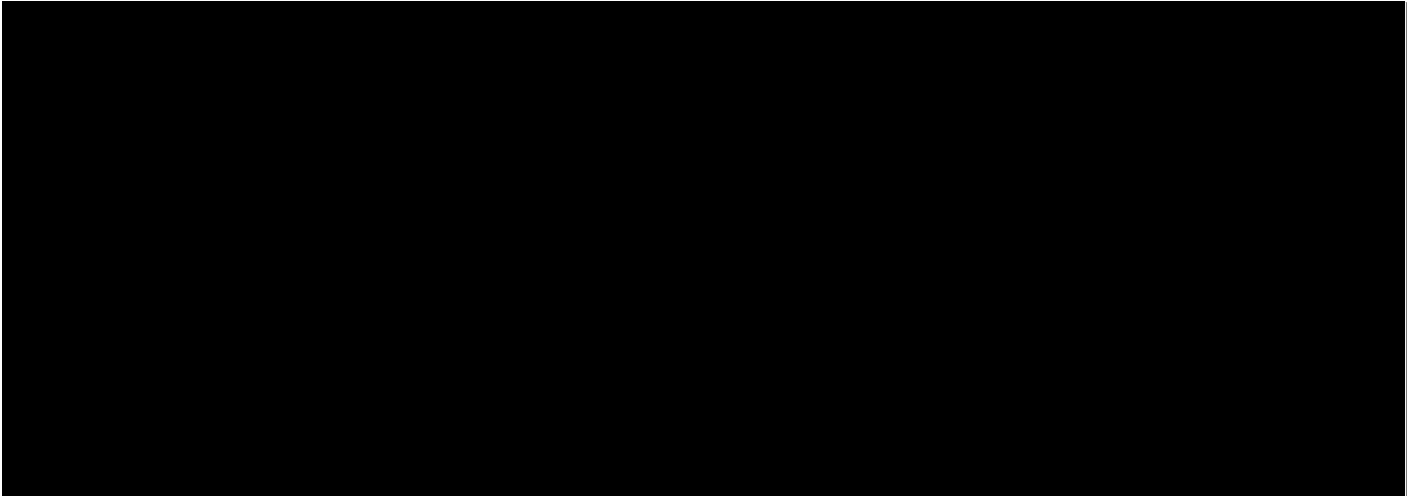






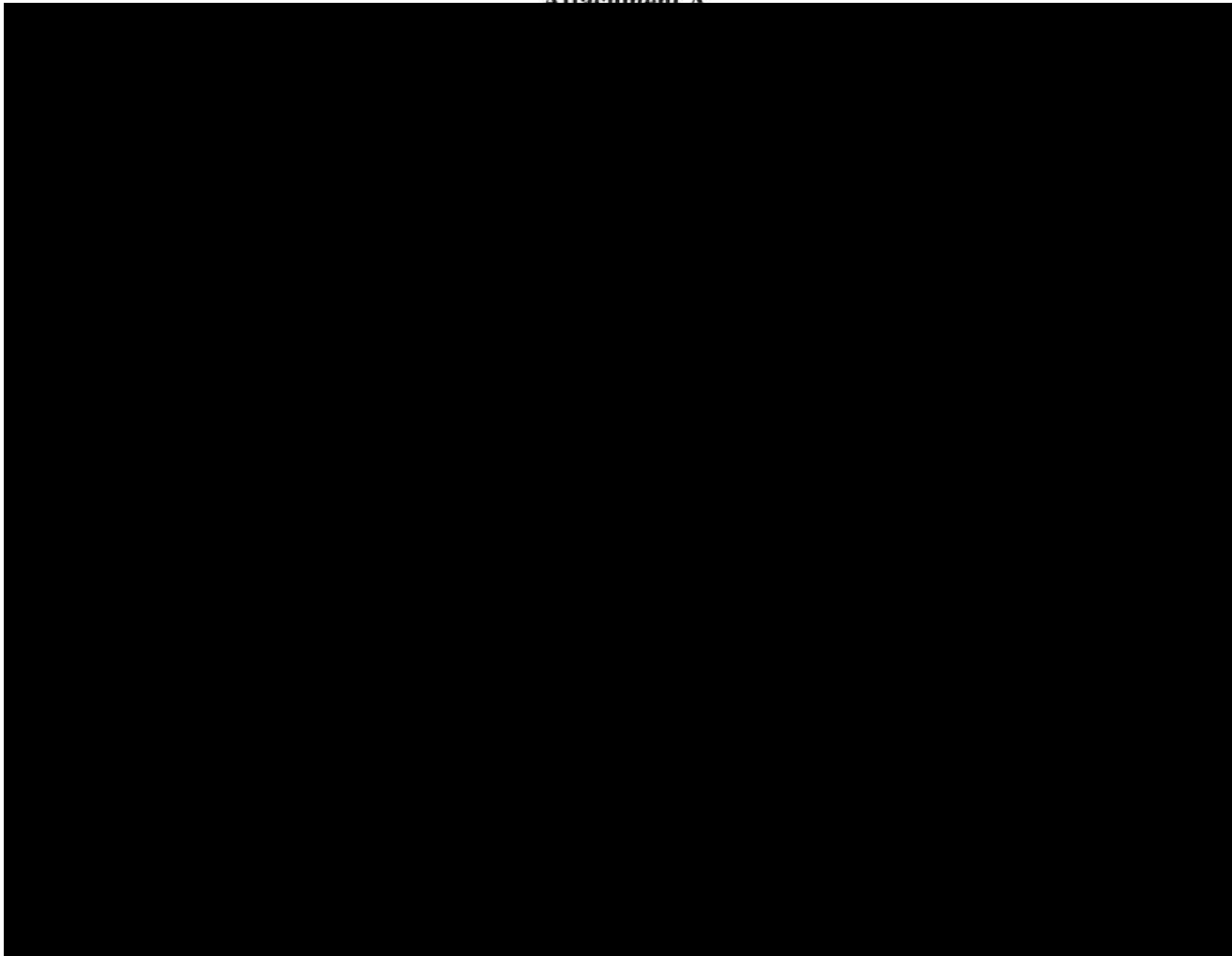








Attachment A





Attachment B

