STATE OF COLORADO
Colorado Department of Education
Contract with
NCS, Pearson, Inc.

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I. PARTIES

This contract, is entered into by and between the State of Colorado, for the use and benefit of the Colorado Department of Education, 201 East Colfax, Denver, Colorado 80203, hereinafter referred to as CDE or State, and NCS Pearson, Inc. 2510 North Dodge Street, Iowa City, Iowa 52245, hereinafter referred to as the Contractor.

II. EFFECTIVE DATE AND NOTICE OF NON-LIABILITY

This Contract shall not be effective or enforceable until it is approved and signed by the Colorado State Controller or designee (hereinafter called the Effective Date). The State shall not

be liable to pay or reimburse Contractor for any performance hereunder including, but not limited to, costs or expenses incurred, or be bound by any provision hereof prior to the Effective Date.

III. RECITALS

A. Authority, Appropriation, and Approval

Funds have been budgeted, appropriated and otherwise made available and a sufficient unencumbered balance thereof remains available for payment. Required approvals, clearance and coordination have been accomplished from and with appropriate agencies.

B. Consideration

The Parties acknowledge that the mutual promises and covenants contained herein and other good and valuable consideration are sufficient and adequate to support this Contract.

C. Purpose

The purpose of this contract is to obtain the required services and deliverables for the development, administration, scoring and reporting of science and social studies for the Colorado summative and alternate assessments.

D. References

All references in this Contract to sections, subsections, exhibits or other attachments, are references to sections, subsections, exhibits or other attachments contained herein or incorporated as a part hereof, unless otherwise noted.

IV. DEFINITIONS

The following terms as used herein shall be construed and interpreted as follows:

"Contract" means this Contract, its terms and conditions, attached exhibits, documents incorporated by reference under the terms of this Contract, and any future modifying agreements, exhibits, attachments or references incorporated herein pursuant to Colorado State law, Fiscal Rules, and State Controller Policies.

"Contract Funds" means funds available for payment by the State to Contractor pursuant to this Contract.

"Evaluation" means the process of examining Contractor's Work and rating it based on criteria established in Section VI and the Exhibits identified below.

"Exhibits and other Attachments" means: Exhibit A, Statement of Work, Attachment 1: Organizational Structure, Attachment 2: Time allocation of key personnel, Attachment 3:

Researchers list, Exhibit B, Summative and Alternate Assessment Schedule, Exhibit C, Liquidated Damages Dates, Exhibit D Summative and Alternate Materials List, Exhibit E Payment Schedule and Exhibit F, Colorado - Summative and Alternate Assessment Pricing Data.

"Goods" means tangible material acquired, produced, or delivered by Contractor either separately or in conjunction with the "Evaluation" means the process of examining Contractor's Work and rating it based on criteria established in Section VI below.

"Party" means the State or Contractor and "Parties" means both the State and Contractor

"Review" means examining Contractor's Work to ensure that it is adequate, accurate, correct and in accordance with the criteria established in Section VI below.

"Services" means the required services to be performed by Contractor pursuant to this Contract.

"Subcontractor" means third-parties, if any, engaged by Contractor to aid in performance of its obligations.

"Work" means the tasks and activities Contractor is required to perform to fulfill its obligations under this Contract, including the performance of the Services and delivery of the Goods.

"Work Product" means the tangible or intangible results of Contractor's Work, including, but not limited to, software, research, reports, studies, data, photographs, negatives or other finished or unfinished documents, drawings, models, surveys, maps, materials, or work product of any type, including drafts.

V. TERM AND EARLY TERMINATION

A. Initial Term-Work Commencement

The Parties' respective performances under this Contract shall commence on the later of either the Effective Date or December 21, 2012. This Contract shall terminate on August 31, 2014, unless sooner terminated or further extended as specified elsewhere herein.

B. Two Month Extension

The State, at its sole discretion upon written notice to Contractor, may unilaterally extend the term of this Contract for a period not to exceed two months if the Parties are negotiating a replacement Contract (and not merely seeking a term extension) at or near the end of any initial term or renewal term. The provisions of this Contract in effect when such notice is given, including, but not limited to prices, rates, and delivery requirements, shall remain in effect during the two-month extension. The two-month extension shall immediately terminate when and if a replacement Contract is approved and signed by the Colorado State Controller.

C. State's Option to Extend

The State may require continued performance for a period of three at the same rates and same terms specified in the Contract. The total duration of this Contract, including the exercise of any options under this clause, shall not exceed five years.

VI. STATEMENT OF WORK

A. Exhibit A, Statement of Work, attached hereto and incorporated herein by reference, sets forth the services and deliverables required by Contractor for the development, administration, scoring and reporting of science and social studies for the Colorado summative and alternate assessments. CDE reserves the right to negotiate additional scope related to English language arts (reading and writing), mathematics and Spanish language arts in the future.

B. Employees

All persons employed by Contractor or Subcontractors to perform Work under this Contract shall be Contractor's or Subcontractors' employee(s) for all purposes hereunder and shall not be employees of the State for any purpose as a result of this Contract.

VII. PAYMENTS TO CONTRACTOR

The State shall, in accordance with the provisions of this section, pay Contractor in the amounts and using the methods set forth below:

A. Maximum Amount

The maximum amount payable under this Contract to Contractor by the State in State Fiscal Year 2013 is $7,265,653, as determined by the State from available funds. Payments to Contractor are limited to the unpaid obligated balance of the Contract. Payments shall be made to Contractor upon completion of the Tasks and Services set forth in Exhibit E in the amounts and on the dates set forth in Exhibit E.

B. Payment

1. Advance, Interim and Final Payments

Any advance payment allowed under this Contract shall comply with State Fiscal Rules and be made in accordance with the provisions of this Contract or such Exhibit. Contractor shall initiate any payment requests by submitting invoices to the State in the form and manner set forth in approved by the State.

2. Interest

The State shall fully pay each invoice within 45 days of receipt thereof if the

amount invoiced represents performance by Contractor previously accepted by the State. Uncontested amounts not paid by the State within 45 days shall bear interest on the unpaid balance beginning on the 46th day at a rate not to exceed one percent per month until paid in full; provided, however, that interest shall not accrue on unpaid amounts that are subject to a good faith dispute. Contractor shall invoice the State separately for accrued interest on delinquent amounts. The billing shall reference the delinquent payment, the number of day's interest to be paid and the interest rate.

3. Available Funds-Contingency-Termination

The State is prohibited by law from making commitments beyond the term of the State's current fiscal year. Therefore, Contractor's compensation beyond the State's current Fiscal Year is contingent upon the continuing availability of State appropriations as provided in the Colorado Special Provisions. If federal funds are used to fund this Contract, in whole or in part, the State's performance hereunder is contingent upon the continuing availability of such funds. Payments pursuant to this Contract shall be made only from available funds encumbered for this Contract and the State's liability for such payments shall be limited to the amount remaining of such encumbered funds. If State or federal funds are not appropriated, or otherwise become unavailable to fund this Contract, the State may terminate this Contract immediately, in whole or in part, without further liability in accordance with the provisions hereof.

4. Erroneous Payments

At the State's sole discretion, payments made to Contractor in error for any reason, including, but not limited to overpayments or improper payments, and unexpended or excess funds received by Contractor, may be recovered from Contractor by deduction from subsequent payments under this Contract or other contracts, grants or agreements between the State and Contractor or by other appropriate methods and collected as a debt due to the State. Such funds shall not be paid to any party other than the State.

5. Use of Funds

Contract Funds shall be used only for eligible costs identified herein and/or in the Budget.

VIII. REPORTING – NOTIFICATION

Reports, Evaluations, and Reviews required under this Section VIII. shall be in accordance with the procedures of and in such form as prescribed by the State.

A. Performance, Progress, Personnel, and Funds

Contractor shall submit a report to the State upon expiration or sooner termination of this

Contract, containing an Evaluation and Review of Contractor's performance and the final status of Contractor's obligations hereunder.

B. Litigation Reporting

Within 10 days after being served with any pleading in a legal action material to the services provided under this Contract or which may affect Contractor's ability to perform its obligations hereunder and filed with a court or administrative agency. Contractor shall notify the State of such action and deliver copies of such pleadings to the State's principal representative as identified herein. If the State's principal representative is not then serving, such notice and copies shall be delivered to the Deputy Commissioner of CDE.

C. Noncompliance

Contractor's failure to provide reports and notify the State in a timely manner in accordance with this Section may result in the delay of payment of funds and/or termination as provided under this Contract.

D. Subcontracts

Copies of any and all subcontracts entered into by Contractor to perform its obligations hereunder shall be submitted to the State or its principal representative upon request by the State. Any and all subcontracts entered into by Contractor related to its performance hereunder shall comply with all applicable federal and state laws.

IX. CONTRACTOR RECORDS

A. Maintenance

Contractor shall make, keep, maintain, and allow inspection and monitoring by the State of a complete file of all records, documents, communications, notes and other written materials, electronic media files, and communications, pertaining in any manner to the Work or the delivery of Services or Goods hereunder. Contractor shall maintain such records until the last to occur of: (i) a period of three years after the date this Contract expires or is sooner terminated, or (ii) final payment is made hereunder, or (iii) the resolution of any pending Contract matters, or (iv) if an audit is occurring, or Contractor has received notice that an audit is pending, until such audit has been completed and its findings have been resolved (collectively, the Record Retention Period).

B. Inspection

Contractor shall permit the State, the federal government and any other duly authorized agent of a governmental agency to audit, inspect, examine, excerpt, copy and/or transcribe Contractor's records related to this Contract during the Record Retention Period for a period of three years following termination of this Contract or final payment hereunder, whichever is later, to assure compliance with the terms hereof or to evaluate

performance hereunder. The State reserves the right to inspect the Work at all reasonable times and places during the term of this Contract, including any extensions or renewals. If the Work fails to conform with the requirements of this Contract, the State may require Contractor promptly to bring the Work into conformity with Contract requirements, at Contractor's sole expense. If the Work cannot be brought into conformance by re-performance or other corrective measures, the State may require Contractor to take necessary action to ensure that future performance conforms to Contract requirements and exercise the remedies available under this Contract, at law or in equity, in lieu of or in conjunction with such corrective measures.

C. Monitoring

Contractor shall permit the State, the federal government, and governmental agencies having jurisdiction, in their sole discretion, to monitor all activities conducted by Contractor pursuant to the terms of this Contract using any reasonable procedure, including, but not limited to: internal evaluation procedures, examination of program data, special analyses, on-site checking, formal audit examinations, or any other procedures. All monitoring controlled by the State shall be performed in a manner that shall not unduly interfere with Contractor's performance hereunder.

Prior to any inspection or monitoring activities by CDE or a third party contracted by CDE, the parties shall execute a Confidentiality Agreement governing the review and use of Contractor's confidential records, trade secrets, processes, and information. Prior to any inspection or monitoring activities by any other State entity, third party contracted by the State, or the Federal Government, Contractor may request that such parties execute a Confidentiality Agreement governing the review and use of Contractor's confidential records, trade secrets, processes, and information.

D. Final Audit Report

If an audit is performed on Contractor's financial records related to payments made pursuant to this program for any fiscal year covering a portion of the term of this Contract, Contractor shall submit a copy of the final audit report or such portion thereof as relates to this program to the State or its principal representative at the address specified herein. If an external audit is performed on Contractor's processes and systems that are used to deliver this Contract, Contractor shall provide a summary of such audit and its finding to the State or its principal representative to the extend such disclosure is not prohibited. As a publicly traded company, Contractor's annual financial statements are posted to the internet and are available at http://www.pearson.com/investors/financial-information/reports-and-resuts.html

X. CONFIDENTIAL INFORMATION-STATE RECORDS

Contractor shall comply with the provisions of this Section if it becomes privy to confidential information in connection with its performance hereunder. Confidential information includes, but is not necessarily limited to, any state records, personnel records, and information concerning individuals. Such information shall not include information required to be disclosed pursuant to

the Colorado Open Records Act, C.R.S. Section 24-72-101, *et seq*.

A. Confidentiality

Contractor shall keep all State records and information confidential at all times and comply with all laws and regulations concerning confidentiality of information. Any request or demand by a third party for State records and information in the possession of Contractor shall be immediately forwarded to the State's principal representative.

B. Notification

Contractor shall notify its agent, employees, Subcontractors and assigns who may come into contact with State records and confidential information that each is subject to the confidentiality requirements set forth herein, and shall provide each with a written explanation of such requirements before permitting them to access such records and information.

C. Use, Security, and Retention

Confidential information of any kind shall not be distributed or sold to any third party or used by Contractor or its agents in any way, except as authorized by this Contract or approved in writing by the State. Contractor shall provide and maintain a secure environment that ensures confidentiality of all State records and other confidential information wherever located. Confidential information shall not be retained in any files or otherwise by Contractor or its agents, except as permitted in this Contract or approved in writing by the State.

D. Disclosure-Liability

Disclosure of State records or other confidential information by Contractor for any reason may be cause for legal action by third parties against Contractor, the State or their respective agents. Contractor shall indemnify, save, and hold harmless the State, its employees and agents, against any and all claims, damages, liability and court awards including costs, expenses, and attorney fees and related costs, incurred as a result of any act or omission by Contractor, or its employees, agents, Subcontractors, or assignees pursuant to this Section.

XI. CONFLICTS OF INTEREST

Contractor shall not engage in any business or personal activities or practices or maintain any relationships which conflict in any way with the full performance of Contractor's obligations hereunder. Contractor acknowledges that with respect to this Contract, even the appearance of a conflict of interest is harmful to the State's interests. Absent the State's prior written approval, Contractor shall refrain from any practices, activities or relationships that reasonably appear to be in conflict with the full performance of Contractor's obligations to the State hereunder. If a conflict or appearance exists, or if Contractor is uncertain whether a conflict or the appearance of a conflict of interest exists, Contractor shall submit to the State a disclosure statement setting

forth the relevant details for the State's consideration. Failure to promptly submit a disclosure statement or to follow the State's direction in regard to the apparent conflict constitutes a breach of this Contract.

XII. INDEMNIFICATION

Contractor shall indemnify, save, and hold harmless the State, its employees and agents, against any and all claims, damages, liability and court awards including costs, expenses, and attorney fees and related costs, incurred as a result of any act or omission by Contractor, or its employees, agents, subcontractors, or assignees pursuant to the terms of this Contract; however, the provisions hereof shall not be construed or interpreted as a waiver, express or implied, of any of the immunities, rights, benefits, protection, or other provisions, of the Colorado Governmental Immunity Act, C.R.S. 24-10-101 *et seq.*, or the Federal Tort Claims Act, 28 U.S.C. 2671 *et seq.*, as applicable, as now or hereafter amended.

XIII. REPRESENTATIONS AND WARRANTIES

Contractor makes the following specific representations and warranties, each of which was relied on by the State in entering into this Contract.

A. Standard and Manner of Performance

Contractor shall perform its obligations hereunder in accordance with the highest standards of care, skill and diligence in Contractor's industry, trade, or profession and in the sequence and manner set forth in this Contract.

B. Legal Authority – Contractor Signatory

Contractor warrants that it possesses the legal authority to enter into this Contract and that it has taken all actions required by its procedures, and by-laws, and/or applicable laws to exercise that authority, and to lawfully authorize its undersigned signatory to execute this Contract, or any part thereof, and to bind Contractor to its terms. If requested by the State, Contractor shall provide the State with proof of Contractor's authority to enter into this Contract within 15 days of receiving such request.

C. Licenses, Permits, Etc.

Contractor represents and warrants that as of the Effective Date it has, and that at all times during the term hereof it shall have and maintain, at its sole expense, all licenses, certifications, approvals, insurance, permits, and other authorizations required by law to perform its obligations hereunder. Contractor warrants that it shall maintain all necessary licenses, certifications, approvals, insurance, permits, and other authorizations required to properly perform this Contract, without reimbursement by the State or other adjustment in Contract Funds. Additionally, all employees, agents, and Subcontractors of Contractor performing Services under this Contract shall hold all required licenses or certifications, if any, to perform their responsibilities. Contractor, if a foreign corporation or other

foreign entity transacting business in the State of Colorado, further warrants that it currently has obtained and shall maintain any applicable certificate of authority to transact business in the State of Colorado and has designated a registered agent in Colorado to accept service of process. Any revocation, withdrawal or non-renewal of licenses, certifications, approvals, insurance, permits or any such similar requirements necessary for Contractor to properly perform the terms of this Contract is a material breach by Contractor and constitutes grounds for termination of this Contract.

XIV. INSURANCE

Contractor and its Subcontractors shall obtain and maintain insurance as specified in this section at all times during the term of this Contract. All policies evidencing the insurance coverage required hereunder shall be issued by insurance companies satisfactory to Contractor and the State.

A. Contractor

1. Public Entities

If Contractor is a "public entity" within the meaning of the Colorado Governmental Immunity Act, C.R.S. Section 24-10-101, *et seq.*, as amended (the GIA), then Contractor shall maintain at all times during the term of this Contract such liability insurance, by commercial policy or self-insurance, as is necessary to meet its liabilities under the GIA. Contractor shall show proof of such insurance satisfactory to the State, if requested by the State. Contractor shall require each contract with a Subcontractor that is a public entity, to include the insurance requirements necessary to meet such Subcontractor's liabilities under the GIA.

2. Non-Public Entities

If Contractor is not a "public entity" within the meaning of the GIA, Contractor shall obtain and maintain during the term of this Contract insurance coverage and policies meeting the same requirements set forth in Section XIII.B with respect to subcontractors that are not "public entities".

B. Contractors – Subcontractors

Contractor shall require each contract with subcontractors other than those that are public entities, providing Goods or Services in connection with this Contract, to include insurance requirements substantially similar to the following:

1. Worker's Compensation

Worker's Compensation Insurance as required by State statute, and Employer's Liability Insurance covering all of Contractor or subcontractor employees acting within the course and scope of their employment.

2. General Liability

Commercial General Liability Insurance written on ISO occurrence form CG 00 01 10/93 or equivalent, covering premises operations, fire damage, independent contractors, products and completed operations, blanket contractual liability, personal injury, and advertising liability with minimum limits as follows: (a) $1,000,000 each occurrence; (b) $1,000,000 general aggregate; (c) $1,000,000 products and completed operations aggregate; and (d) $50,000 any one fire.

If any aggregate limit is reduced below $1,000,000 because of claims made or paid, subcontractor shall immediately obtain additional insurance to restore the full aggregate limit and furnish to Contractor a certificate or other document satisfactory to Contractor showing compliance with this provision.

3. Automobile Liability

Automobile Liability Insurance covering any auto (including owned, hired and non-owned autos) with a minimum limit of $1,000,000 each accident combined single limit.

4. Technology Errors & Omissions

Such insurance shall cover negligent acts, errors or omissions or negligence in the delivery, performance or non-performance of products and/or services under this Contract. Such Technology Errors & Omissions insurance shall include, at a minimum, coverage for claims and losses with respect to network or data risks (such as data breaches, release of confidential information, unauthorized access/use of information, identity theft, invasion of privacy, damage/loss/theft of data, degradation, downtime, and copyrights, trademarks, services makes and trade dress. Minimum coverage shall be $1,000.000.00.

5. Primacy of Coverage

Coverage required of Contractor and subcontractor shall be primary over any insurance or self-insurance program carried by Contractor or the State.

6. Cancellation

The above insurance policies shall include provisions preventing cancellation or non-renewal without at least 30 days prior notice to Contractor and Contractor shall forward such notice to the State in accordance with Section XVII (Notices and Representatives) within seven days of Contractor's receipt of such notice.

7. Subrogation Waiver

All insurance policies in any way related to this Contract and secured and maintained by Contractor or its subcontractors as required herein shall include clauses stating that each carrier shall waive all rights of recovery, under

subrogation or otherwise, against Contractor or the State, its agencies, institutions, organizations, officers, agents, employees, and volunteers.

8. Certificates

Contractor and all subcontractors shall provide certificates showing insurance coverage required hereunder to the State within seven business days of the Effective Date of this Contract. Within thirty (30) days after renewal or expiration of any such coverage, Contractor and each subcontractors shall deliver to the State or Contractor certificates of insurance evidencing renewals thereof. In addition, upon request by the State at any other time during the term of this Contract or any sub-contract, Contractor and each subcontractors shall, within 10 days of such request, supply to the State evidence satisfactory to the State of compliance with the provisions of this Section.

XV. BREACH

A. Defined

In addition to any breaches specified in other sections of this Contract, the failure of either Party to perform any of its material obligations hereunder in whole or in part or in a timely or satisfactory manner, constitutes a breach. The institution of proceedings under any bankruptcy, insolvency, reorganization or similar law, by or against Contractor, or the appointment of a receiver or similar officer for Contractor or any of its property, which is not vacated or fully stayed within 20 days after the institution or occurrence thereof, shall also constitute a breach.

B. Notice and Cure Period

In the event of a breach, notice of such shall be given in writing by the aggrieved Party to the other Party. If such breach is not cured within 30 days of receipt of written notice, or if a cure cannot be completed within 30 days, or if cure of the breach has not begun within 30 days and pursued with due diligence, the State may exercise any of the remedies set forth in Section XVI. Notwithstanding anything to the contrary herein, the State, in its sole discretion, need not provide advance notice or a cure period and may immediately terminate this Contract in whole or in part if reasonably necessary to preserve public safety or to prevent immediate public crisis.

XVI. REMEDIES

If Contractor is in breach under any provision of this Contract, the State shall have all of the remedies listed in this Section in addition to all other remedies set forth in other sections of this Contract following the notice and cure period set forth in Section XV. The State may exercise any or all of the remedies available to it, in its sole discretion, concurrently or consecutively.

A. Termination for Cause and/or Breach

The State may terminate this entire Contract or any part of this Contract. Exercise by the State of this right shall not be a breach of its obligations hereunder. Contractor shall continue performance of this Contract to the extent not terminated, if any.

1. Obligations and Rights

To the extent specified in any termination notice, Contractor shall not incur further obligations or render further performance hereunder past the effective date of such notice, and shall terminate outstanding orders and subcontracts with third parties. However, Contractor shall complete and deliver to the State all Work, Services and Goods not cancelled by the termination notice and may incur obligations as are necessary to do so within this Contract's terms. At the sole discretion of the State, Contractor shall assign to the State all of Contractor's right, title, and interest under such terminated orders or subcontracts. Upon termination, Contractor shall take timely, reasonable and necessary action to protect and preserve property in the possession of Contractor in which the State has an interest. All materials owned by the State in the possession of Contractor shall be immediately returned to the State. All Work Product, at the option of the State, shall be delivered by Contractor to the State and shall become the State's property.

2. Payments

The State shall reimburse Contractor only for accepted performance up to the date of termination. If, after termination by the State, it is determined that Contractor was not in breach or that Contractor's action or inaction was excusable, such termination shall be treated as a termination in the public interest and the rights and obligations of the Parties shall be the same as if this Contract had been terminated in the public interest, as described herein.

3. Damages and Withholding

Notwithstanding any other remedial action by the State, Contractor shall remain liable to the State for any damages sustained by the State by virtue of any breach under this Contract by Contractor and the State may withhold any payment to Contractor for the purpose of mitigating the State's damages, until such time as the exact amount of damages due to the State from Contractor is determined. The State may withhold any amount that may be due Contractor as the State deems necessary to protect the State against loss, including loss as a result of outstanding liens, claims of former lien holders, or for the excess costs incurred in procuring similar goods or services. Contractor shall be liable for excess costs incurred by the State in procuring from third parties replacement Work, Services or substitute Goods as cover.

B. Early Termination in the Public Interest

The State is entering into this Contract for the purpose of carrying out the public policy of the State of Colorado, as determined by its Governor, General Assembly, and/or Courts. If this Contract ceases to further the public policy of the State, the State, in its sole discretion, may terminate this Contract in whole or in part. Exercise by the State of this right shall not constitute a breach of the State's obligations hereunder. This subsection shall not apply to a termination of this Contract by the State for cause or breach by Contractor, which shall be governed by Section XV.A or as otherwise specifically provided for herein.

1. Method and Content

The State shall notify Contractor of such termination. The notice shall specify the effective date of the termination and whether it affects all or a portion of this Contract.

2. Obligations and Rights

Upon receipt of a termination notice, Contractor shall be subject to and comply with the same obligations and rights set forth in Section XV.A.1.

3. Payments

If this Contract is terminated by the State pursuant to this Section XV.B, Contractor shall be paid an amount which bears the same ratio to the total reimbursement under this Contract as Contractor's obligations that were satisfactorily performed bear to the total obligations set forth in this Contract, less payments previously made. Additionally, if this Contract is less than 60% completed, the State may reimburse Contractor for a portion of actual out-of-pocket expenses (not otherwise reimbursed under this Contract) incurred by Contractor which are directly attributable to the uncompleted portion of Contractor's obligations hereunder; provided that the sum of any and all reimbursement shall not exceed the maximum amount payable to Contractor hereunder.

C. Remedies Not Involving Termination

The State, its sole discretion, may exercise one or more of the following remedies in addition to other remedies available to it:

1. Suspend Performance

Suspend Contractor's performance with respect to all or any portion of this Contract pending necessary corrective action as specified by the State without entitling Contractor to an adjustment in price/cost or performance schedule. Contractor shall promptly cease performance and incurring costs in accordance with the State's directive and the State shall not be liable for costs incurred by

Contractor after the suspension of performance under this provision.

2. Withhold Payment

Withhold payment to Contractor until corrections in Contractor's performance are satisfactorily made and completed.

3. Deny Payment

Deny payment for those obligations not performed, that due to Contractor's actions or inactions, cannot be performed or, if performed, would be of no value to the State; provided, that any denial of payment shall be reasonably related to the value to the State of the obligations not performed.

4. Removal

Notwithstanding any other provision herein, the State may demand immediate removal of any of Contractor's employees, agents, or subcontractors whom the State deems incompetent, careless, insubordinate, unsuitable, or otherwise unacceptable, or whose continued relation to this Contract is deemed to be contrary to the public interest or the State's best interest.

5. Intellectual Property

If Contractor infringes on a patent, copyright, trademark, trade secret or other intellectual property right while performing its obligations under this Contract, Contractor shall, at the State's option (a) obtain for the State or Contractor the right to use such products and services; (b) replace any Goods, Services, or other product involved with non-infringing products or modify them so that they become non-infringing; or, (c) if neither of the foregoing alternatives are reasonably available, remove any infringing Goods, Services, or products and refund the price paid therefore to the State.

XVII. NOTICES AND REPRESENTATIVES

Each individual identified below is the principal representative of the designating Party. All notices required to be given hereunder shall be hand delivered with receipt required or sent by certified or registered mail to such Party's principal representative at the address set forth below. In addition to, but not in lieu of a hard-copy notice, notice also may be sent by e-mail to the e-mail addresses, if any, set forth below. Either Party may from time to time designate by written notice substitute addresses or persons to whom such notices shall be sent. Unless otherwise provided herein, all notices shall be effective upon receipt.

State:

Joyce Zurkowski
Department of Education
201 East Colfax

Denver, Colorado 80203
303.866.6760
Zurkowski_j@cde.state.co.us

Contractor:

Jim Hill
NCS Pearson, Inc.
19500 Bulverde Road
San Antonio, TX 78259
Jim.hill@pearson.com

XVIII. RIGHTS IN DATA, DOCUMENTS, AND COMPUTER SOFTWARE

A. Any software, research, reports, studies, data, photographs, negatives or other documents, drawings, models, materials, or Work Product of any type, including drafts, prepared by Contractor in the performance of its obligations and delivered under this Contract shall be the exclusive property of the State and, all Work Product shall be delivered to the State by Contractor upon completion or termination hereof. The State's exclusive rights in such Work Product shall include, but not be limited to, the right to copy, publish, display, transfer, and prepare derivative works. Contractor shall not use, willingly allow, cause or permit such Work Product to be used for any purpose other than the performance of Contractor's obligations hereunder without the prior written consent of the State.

B. The Contractor shall retain exclusive ownership of all pre-existing intellectual property and derivative works thereof used in providing services under the Contract, except with respect to any rights specifically granted under a license agreement entered into pursuant to a contract resulting from RFP-ER-CDE-12-021 Student Assessments. Contractor shall not incorporate into the Work Product any Contractor owned pre-existing intellectual property without the prior written consent of the State. The Parties agree that there is no software included in the Work Product. In the event that software is included in the Work Product, the parties will specifically amend this clause to address the ownership of such software including any that may be derivative of Contractor's pre-existing intellectual property.

XIX. GOVERNMENTAL IMMUNITY

Liability for claims for injuries to persons or property arising from the negligence of the State of Colorado, its departments, institutions, agencies, boards, officials, and employees is controlled and limited by the provisions of the Governmental Immunity Act Section 24-10-101, *et seq.* and the risk management statutes, C.R.S. Section 24-30-1501, *et seq.*, as amended.

XX. STATEWIDE CONTRACT MANAGEMENT SYSTEM

If the maximum amount payable to Contractor under this Contract is greater than $100,000,

either on the Effective Date or at anytime thereafter, this Section applies.

Contractor agrees to be governed, and to abide, by the provisions of C.R.S. Section 24-102-205, Section 24-102-206, Section 24-103-601, Section 24-103.5-101 and Section 24-105-102 concerning the monitoring of vendor performance on state contracts and inclusion of contract performance information in a statewide contract management system.

Contractor's performance shall be subject to Evaluation and Review in accordance with the terms and conditions of this Contract, State law, including C.R.S. Section 24-103.5-101, and State Fiscal Rules, Policies and Guidance. Evaluation and Review of Contractor's performance shall be part of the normal contract administration process and Contractor's performance will be systematically recorded in the statewide Contract Management System. Areas of Evaluation and Review shall include, but shall not be limited to quality, cost and timeliness. Collection of information relevant to the performance of Contractor's obligations under this Contract shall be determined by the specific requirements of such obligations and shall include factors tailored to match the requirements of Contractor's obligations. Such performance information shall be entered into the statewide Contract Management System at intervals established herein and a final Evaluation, Review and Rating shall be rendered within 30 days of the end of the Contract term. Contractor shall be notified following each performance Evaluation and Review, and shall address or correct any identified problem in a timely manner and maintain work progress.

Should the final performance Evaluation and Review determine that Contractor demonstrated a gross failure to meet the performance measures established hereunder, the Executive Director of the Colorado Department of Personnel and Administration (Executive Director), upon request by CDE, and showing of good cause, may debar Contractor and prohibit Contractor from bidding on future contracts. Contractor may contest the final Evaluation, Review and Rating by: (a) filing rebuttal statements, which may result in either removal or correction of the evaluation (C.R.S. Section 24-105-102(6)), or (b) under C.R.S. Section-105-102(6), exercising the debarment protest and appeal rights provided in C.R.S. Sections 24-109-106, 107, 201 or 202, which may result in the reversal of the debarment and reinstatement of Contractor, by the Executive Director, upon showing of good cause.

XXI. GENERAL PROVISIONS

A. Assignment and Subcontracts

Contractor's rights and obligations hereunder are personal and may not be transferred, assigned or subcontracted without the prior, written consent of the State. Any attempt at assignment, transfer, subcontracting without such consent shall be void. All assignments, subcontracts, or subcontractors approved by Contractor or the State are subject to all of the provisions hereof. Contractor shall be solely responsible for all aspects of subcontracting arrangements and performance.

B. Binding Effect

Except as otherwise provided in Section XXI.A, all provisions herein contained, including the benefits and burdens, shall extend to and be binding upon the Parties'

respective heirs, legal representatives, successors, and assigns.

C. Captions

The captions and headings in this Contract are for convenience of reference only, and shall not be used to interpret, define, or limit its provisions.

D. Counterparts

This Contract may be executed in multiple identical original counterparts, all of which shall constitute one agreement.

E. Entire Understanding

This Contract represents the complete integration of all understandings between the Parties and all prior representations and understandings, oral or written, are merged herein. Prior or contemporaneous additions, deletions, or other changes hereto shall not have any force or affect whatsoever, unless embodied herein.

F. Jurisdiction and Venue

All suits or actions related to this Contract shall be filed and proceedings held in the State of Colorado and exclusive venue shall be in the City and County of Denver.

G. Modification

1. By the Parties

Except as specifically provided in this Contract, modifications of this Contract shall not be effective unless agreed to in writing by both parties in an amendment to this Contract, properly executed and approved in accordance with applicable Colorado State law, State Fiscal Rules.

2. By Operation of Law

This Contract is subject to such modifications as may be required by changes in Federal or Colorado State law, or their implementing regulations. Any such required modification automatically shall be incorporated into and be part of this Contract on the effective date of such change, as if fully set forth herein.

H. Order of Precedence

The provisions of this Contract shall govern the relationship of the State and Contractor. In the event of conflicts or inconsistencies between this Contract and its exhibits and attachments, including, but not limited to, those provided by Contractor, such conflicts or inconsistencies shall be resolved by reference to the documents in the following order of priority:

1. Colorado Special Provisions.

2. The provisions of the main body of this Contract.

I. Severability

Provided this Contract can be executed and performance of the obligations of the Parties accomplished within its intent, the provisions hereof are severable and any provision that is declared invalid or becomes inoperable for any reason shall not affect the validity of any other provision hereof, provided that the Parties can continue to perform their obligations under this Contract in accordance with its intent.

J. Survival of Certain Contract Terms

Notwithstanding anything herein to the contrary, provisions of this Contract requiring continued performance, compliance, or effect after termination hereof, shall survive such termination and shall be enforceable by the State if Contractor fails to perform or comply as required.

K. Taxes

The State is exempt from all federal excise taxes under IRC Chapter 32 (No. 84-730123K) and from all State and local government sales and use taxes under C.R.S. Sections 39-26-101 and 201 *et seq*. Such exemptions apply when materials are purchased or services are rendered to benefit the State; provided however, that certain political subdivisions (e.g., City of Denver) may require payment of sales or use taxes even though the product or service is provided to the State. Contractor shall be solely liable for paying such taxes as the State is prohibited from paying or reimbursing Contractor for such taxes.

L. Third Party Beneficiaries

Enforcement of this Contract and all rights and obligations hereunder are reserved solely to the Parties. Any services or benefits which third parties receive as a result of this Contract are incidental to the Contract, and do not create any rights for such third parties.

M. Waiver

Waiver of any breach under a term, provision, or requirement of this Contract, or any right or remedy hereunder, whether explicitly or by lack of enforcement, shall not be construed or deemed as a waiver of any subsequent breach of such term, provision or requirement, or of any other term, provision, or requirement.

N. CORA Disclosure

To the extent not prohibited by federal law, this Contract and the performance measures and standards under C.R.S. Section 24-103.5-101, if any, are subject to public release through the Colorado Open Records Act, C.R.S. Sections 24-72-101, *et seq.*

O. Federal Audit Provisions

Office of Management and Budget (OMB) Circular No. A-133 Audits of States, Local Governments, and Non-Profit Organizations defines audit requirements under the Single Audit Act of 1996 (Public Law 104-156). All state and local governments and non-profit organizations expending $500,000 or more from all sources (direct or from pass-through entities) are required to comply with the provisions of Circular No. A-133. The Circular also requires pass-through entities to monitor the activities of subrecipients and ensure that subrecipients meet the audit requirements. To identify its pass-through responsibilities, the State of Colorado requires all subrecipients to notify the State when expected or actual expenditures of federal assistance from all sources equal or exceed $500,000.

P. Debarment and Suspension

1. Contractor shall not enter into any contract or subcontract in connection with this Contract with a party that has been debarred or suspended from contracting with the Federal Government or the State of Colorado. See Excluded Parties List System at https://www.epls.gov

2. If this is a covered transaction or the Contract amount exceeds $100,000, the Contractor certifies to the best of its knowledge and belief that it and its principals and Subcontractors are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded by any Federal department or agency.

3. This certification is a material representation of fact upon which reliance was placed when the State determined to enter into this transaction. If it is later determined that the Contractor knowingly rendered an erroneous certification, in addition to other remedies available at law or by contract, the State may terminate this Contract for default.

4. The Contractor shall provide immediate written notice to the State if it has been debarred, suspended, proposed for debarment, declared ineligible or voluntarily excluded by any Federal department or agency.

5. The terms "covered transaction," "debarment," "suspension," "ineligible," "lower tier covered transaction," "principal," and "voluntarily excluded," as used in this paragraph, have the meanings set out in 2 CFR Parts 180 and 376.

6. The Contractor agrees that it will include this certification in all lower tier covered transactions and subcontracts that exceed $100,000.

Q. Lobbying

The Contractor certifies, to the best of his or her knowledge and belief, that:

No federal appropriated funds have been paid or shall be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any federal Contract, the making of any federal grant, the making of any federal loan, the entering into of any cooperative agreement and the extension, continuation, renewal, amendment, or modification of any federal Contract, grant, loan, or cooperative agreement.

If any funds other than federally appropriated funds have been paid or shall be paid to any person for influencing or attempting to influence an office or employee of any agency, a Member of Congress, an office or employee of Congress, or an employee of a Member of Congress in connection with this federal Contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.

The undersigned shall require that the language of this certification be included in the award documents for all sub awards at all tiers (including subcontracts, subgrants and Contracts under grants, loans and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

R. Force Majeure

Neither the Contractor nor the State shall be liable to the other for any delay in, or failure of performance of, any covenant or promise contained in this Contract, nor shall any delay or failure constitute default or give rise to any liability for damages if, and only to the extent that, such delay or failure is caused by "force majeure." As used in this Contract, "force majeure" means acts of God; acts of the public enemy; acts of the state and any governmental entity in its sovereign or contractual capacity; fires; floods; epidemics; quarantine restrictions; strikes or other labor disputes; freight embargoes; or unusually severe weather.

S. Liquidated Damages

The late delivery or untimely performance of this contract by Contractor will cause irreparable harm to CDE in light of its obligations under state and federal laws. CDE shall have the right to assess liquidated damages in the amount set forth in Exhibit C if Contractor fails to meet the deliverable dates set forth in Schedules A and B and as result of this failure CDE incurs actual harm or damage. The parties agree that the damages from breach of this contract are difficult to prove or estimate, and the amount of liquidated damages specified herein represents a reasonable estimation of damages that will be suffered by CDE from late performance, including costs of additional oversight, staff commitment and time allocation. The right to assess Liquidated Damages will end upon substantial completion of the deliverable. Substantial completion is defined as the

moment when the deliverable is capable of being used for its intended purpose. The parties agree that this is a reasonable anticipated calculation of damages and is not intended as a penalty. Liquidated damages shall not exceed 5% of the annual contract value. CDE shall not assess liquidated damages when the delay in delivery or performance is due to the actions of CDE or otherwise arises out of causes beyond the control and without the fault or negligence of the Contractor. Assessment of liquidated damages shall not be exclusive of or in any way limit remedies available to CDE at law or equity for Contractor breach.

STATE OF COLORADO SUPPLEMENTAL PROVISIONS FOR FEDERALLY FUNDED CONTRACTS, GRANTS, AND PURCHASE ORDERS SUBJECT TO THE FEDERAL FUNDING ACCOUNTABILITY AND TRANSPARENCY ACT OF 2006 (FFATA), AS AMENDED AS OF 10-15-10

The Contract, grant, or purchase order to which these Supplemental Provisions are attached has been funded, in whole or in part, with an Award of Federal funds. In the event of a conflict between the provisions of these Supplemental Provisions, the Special Provisions, the Contract or any attachments or exhibits incorporated into and made a part of the contract, the provisions of these Supplemental Provisions shall control.

1. **DEFINITIONS.** For the purposes of these supplemental provisions, the following terms shall have the meanings ascribed to them below.

1.1. "Award" means an award of federal financial assistance that a non-federal entity receives or administers in the form of:

1.1.1. Grants;

1.1.2. Contracts;

1.1.3. Cooperative agreements, which do not include cooperative research and development agreements (CRDA) pursuant to the Federal Technology Transfer Act of 1986, as amended (15 U.S.C. 3710);

1.1.4. Loans;

1.1.5. Loan guarantees;

1.1.6. Subsidies;

1.1.7. Insurance;

1.1.8. Food commodities;

1.1.9. Direct appropriations;

1.1.10. Assessed and voluntary contributions; and

1.1.11. Other financial assistance transactions that authorize the expenditure of federal funds by non-federal entities.

Award ***does not*** include:

1.1.12. Technical assistance, which provides services in lieu of money;

1.1.13. A transfer of title to federally-owned property provided in lieu of money; even if the award is called a grant;

1.1.14. Any award classified for security purposes; or

1.1.15. Any Award funded in whole or in part with recovery funds, as defined in section 1512 of the American Recovery and Reinvestment Act (ARRA) of

2009 (Public Law 111-5).

1.2. **"Central Contractor Registration (CCR)"** means the federal repository into which an entity must enter the information required under the Transparency Act, which may be found at http://www.bpn.gov/ccr

1.3. **"Contract"** means the contract to which these Supplemental Provisions are attached and includes all Award types in Sections 1.1.1 through 1.1.11 above.

1.4. **"Contractor"** means the party or parties to a contract funded, in whole or in part, with federal financial assistance, other than the Prime Recipient, and includes grantees, subgrantees, Subrecipients, and borrowers. For purposes of Transparency Act reporting, Contractor does not include Vendors.

1.5. **"Data Universal Numbering System (DUNS) Number"** means the nine-digit number established and assigned by Dun and Bradstreet, Inc. to uniquely identify a business entity. Dun and Bradstreet's website may be found at: http://fedgov.dnb.com/webform.

1.6. **"Entity"** means all of the following as defined at 2 CFR Part 25, Subpart C;

1.6.1. A governmental organization, which is a state, local government, or Indian tribe;

1.6.2. A foreign public entity;

1.6.3. A domestic or foreign non-profit organization;

1.6.4. A domestic or foreign for-profit organization; and

1.6.5. A federal agency, but only a subrecipient under an award or Subaward to a non-federal entity.

1.7. **"Executive"** means an officer, managing partner or any other employee in a management position.

1.8. **"Federal Award Identification Number (FAIN)"** means an Award number assigned by a federal agency to a Prime Recipient.

1.9. **"FFATA"** means the Federal Funding Accountability and Transparency Act of 2006 (public law 109-282), as amended by Section 6202 of Public Law 110-252. FFATA, as amended, also is referred to as the "Transparency Act."

1.10. **"Prime Recipient"** means a Colorado state agency or institution of higher education that receives an Award.

1.11. **"Subaward"** means a legal instrument pursuant to which a Prime Recipient of Award funds awards all or a portion of such funds to a Subrecipient, in exchange for the Subrecipient's support in the performance of all or any portion of the substantive project or program for which the Award was granted.

1.12. **"Subrecipient"** means a non-federal entity (or a federal agency under an award or subaward to a non-federal entity) receiving federal funds through a Prime Recipient to

support the performance of the federal project or program for which the federal funds were awarded. A Subrecipient is subject to the terms and conditions of the federal award to the Prime Recipient, including program compliance requirements. The term "Subrecipient" includes and may be referred to as subgrantee.

1.13. "Subrecipient Parent DUNS Number" means the Subrecipient parent organization's 9-digit Data Universal Numbering System (DUNS) number that appears in the Subrecipient's Central Contractor Registration (CCR) profile, if applicable.

1.14. "Supplemental Provisions" means these Supplemental Provisions for federally funded Contracts, Grants, and purchase orders subject to the Federal Funding Accountability and Transparency Act of 2006, as amended, as may be revised pursuant to ongoing guidance from the relevant federal or State of Colorado agency or institution of higher education.

1.15. "Total Compensation" means the cash and noncash dollar value earned by an executive during the Prime Recipient's or Subrecipient's preceding fiscal year and includes the following:

1.15.1. Salary and bonus;

1.15.2. Awards of stock, stock options, and stock appreciation rights, using the dollar amount recognized for financial statement reporting purposes with respect to the fiscal year in accordance with the statement of Financial Accounting Standards No. 123 (Revised 2005) (FAS 123R), shared based payments;

1.15.3. Earnings for services under non-equity incentive plans, not including group life, health, hospitalization or medical reimbursement plans that do not discriminate in favor of executives and are available generally to all salaried employees;

1.15.4. Change in present value of defined benefit and actuarial pension plans;

1.15.5. Above-market earnings on deferred compensation which is not tax-qualified;

1.15.6. Other compensation, if the aggregate value of all such other compensation (e.g. severance, termination payments, value of life insurance paid on behalf of the employee, perquisites or property) for the executive exceeds $10,000.

1.16. "**Transparency Act**" means the Federal Funding Accountability and Transparency Act of 2006 (Public Law 109-282), as amended by Section 6202 of Public Law 110-252. The Transparency Act also is referred to as FFATA.

1.17 "Vendor" means a dealer, distributor, merchant or other seller providing property or services required for a project or program funded by an Award. A Vendor is not a Prime Recipient or a Subrecipient and is not subject to the terms and conditions of the federal Award. Program compliance requirements do not pass through to a Vendor.

2. **Compliance.** Contractor shall comply with all applicable provisions of the Transparency Act and the regulations issued pursuant thereto, including but not limited to these Supplemental Provisions. Any revisions to such provisions or regulations shall automatically become a part of these Supplemental Provisions, without the necessity of either party executing any further instrument. The State of Colorado may provide written notification to Contractor of such revisions, but such notice shall not be a condition precedent to the effectiveness of such revisions.

3. **Central Contractor Registration (CCR) and Data Universal Numbering System (DUNS) requirements.**

   3.1. CCR. Contractor shall maintain the currency of its information in the CCR until the Contractor submits the final financial report required under the award or receives final payment, whichever is later. Contractor shall review and update the CCR information at least annually after the initial registration, and more frequently if required by changes in its information.

   3.2. DUSN. Contractor shall provide its DUNS number to its Prime Recipient, and shall update Contractor's information in Dun & Bradstreet, Inc. at least annually after the initial registration, and more frequently if required by changes in Contractor's information.

4. **Total compensation.** Contractor shall include total compensation in CCR for each of its five most highly compensated executives for the preceding fiscal year if:

   4.1. The total federal funding authorized to date under the award is $25,000 or more; and

   4.2. In the preceding fiscal year, Contractor received:

      4.2.1. 80% or more of its annual gross revenues from federal procurement contracts and subcontracts and/or federal financial assistance awards or Subawards subject to the Transparency Act; and

      4.2.2. $25,000,000 or more in annual gross revenues from federal procurement contracts and subcontracts and/or federal financial assistance awards or Subawards subject to the transparency act; and

   4.3. The public does not have access to information about the compensation of such executives through periodic reports filed under section 13(a) or 15(d) of the securities exchange act of 1934 (15 U.S.C. 78m (a), 78o (d) or Section 6104 of the Internal Revenue Code of 1986.

5. **Reporting.** Contractor shall report data elements to CCR and to the Prime Recipient as required in Section 7 below if Contractor is a Subrecipient for the Award pursuant to the Transparency Act. No direct payment shall be made to contractor for providing any reports required under these Supplemental Provisions and the cost of producing such reports shall be included in the contract price. The reporting requirements in Section 7 below are based on guidance from the US Office of Management and Budget (OMB), and as such are subject to change at any time by OMB. Any such changes shall be automatically incorporated into this Contract and shall become part of Contractor's obligations under this contract, as provided in Section 2 above. The Colorado Office of the State Controller will provide summaries of

revised OMB reporting requirements at http://www.colorado.gov/dpa/dfp/sco/ffata.htm

6. **Effective Date and Dollar Threshold for Reporting.** The effective date of these Supplemental Provisions apply to new Awards as of October 1, 2010. Reporting requirements in Section 7 below apply to new Awards as of October 1, 2010, if the initial award is $25,000 or more. If the initial award is below $25,000 but subsequent award modifications result in a total award of $25,000 or more, the Award is subject to the reporting requirements as of the date the award exceeds $25,000. If the initial Award is $25,000 or more, but funding is subsequently de-obligated such that the total award amount falls below $25,000, the award shall continue to be subject to the reporting requirements.

7. **Subrecipient Reporting Requirements.** If Contractor is a Subrecipient, Contractor shall report as set forth below.

7.1 to CCR. A Subrecipient shall register in CCR and report the following data elements in CCR ***for each*** federal award identification number no later than the end of the month following the month in which the Subaward was made:

7.1.1 Subrecipient DUNS number;

7.1.2 Subrecipient DUNS number + 4 if more than one electronic funds transfer (EFT) account;

7.1.3 Subrecipient parent DUNS number;

7.1.4 Subrecipient's address, including: street address, city, state, country, zip + 4, and congressional district;

7.1.5 Subrecipient's top 5 most highly compensated executives if the criteria in Section 4 above are met; and

7.1.6 subrecipient's total compensation of top 5 most highly compensated executives if criteria in §4 above met.

7.2 To Prime Recipient. A Subrecipient shall report to its Prime Recipient, upon the effective date of the Contract, the following data elements:

7.2.1 Subrecipient's DUNS number as registered in CCR.

7.2.2 Primary place of performance information, including: street address, city, state, country, zip code + 4, and congressional district.

8. **Exemptions.**

8.1. These Supplemental Provisions do not apply to an individual who receives an Award as a natural person, unrelated to any business or non-profit organization he or she may own or operate in his or her name.

8.2 A Contractor with gross income from all sources of less than $300,000 in the previous tax year is exempt from the requirements to report Subawards and the total compensation of its most highly compensated executives.

8.3 Effective October 1, 2010, "Award" currently means a Grant, cooperative agreement, or other arrangement as defined in section 1.1 of these special provisions. On future dates

"award" may include other items to be specified by OMB in policy memoranda available at the OMB web site; award also will include other types of awards subject to the Transparency Act.

8.4 There are no Transparency Act reporting requirements for Vendors.

9. **Event of default.** Failure to comply with these supplemental provisions shall constitute an event of default under the Contract and the State of Colorado may terminate the Contract upon 30 days prior written notice if the default remains uncured five calendar days following the termination of the 30 day notice period. This remedy will be in addition to any other remedy available to the State of Colorado under the Contract, at law or in equity.

COLORADO SPECIAL PROVISIONS

The Special Provisions apply to all Contracts except where noted in italics.

1. CONTROLLER'S APPROVAL. C.R.S. Section 24-30-202 (1).

This Contract shall not be valid until it has been approved by the Colorado State Controller or designee.

2. FUND AVAILABILITY. C.R.S. Section 24-30-202(5.5).

Financial obligations of the State payable after the current fiscal year are contingent upon funds for that purpose being appropriated, budgeted, and otherwise made available.

3. GOVERNMENTAL IMMUNITY.

No term or condition of this Contract shall be construed or interpreted as a waiver, express or implied, of any of the immunities, rights, benefits, protections, or other provisions, of the Colorado Governmental Immunity Act, C.R.S. Section 24-10-101 *et seq.*, or the Federal Tort Claims Act, 28 U.S.C. Section Section 1346(b) and 2671 *et seq.*, as applicable now or hereafter amended.

4. INDEPENDENT CONTRACTOR

Contractor shall perform its duties hereunder as an independent contractor and not as an employee. Neither Contractor nor any agent or employee of Contractor shall be deemed to be an agent or employee of the State. Contractor and its employees and agents are not entitled to unemployment insurance or workers compensation benefits through the State and the State shall not pay for or otherwise provide such coverage for Contractor or any of its agents or employees. Unemployment insurance benefits shall be available to Contractor and its employees and agents only if such coverage is made available by Contractor or a third party. Contractor shall pay when due all applicable employment taxes and income taxes and local head taxes incurred pursuant to this Contract. Contractor shall not have authorization, express or implied, to bind the State to any contract, liability or understanding, except as expressly set forth herein. Contractor shall **(a)** provide and keep in force workers' compensation and unemployment compensation insurance in the amounts required by law, **(b)** provide proof thereof when requested by the State, and **(c)** be solely responsible for its acts and those of its employees and agents.

5. COMPLIANCE WITH LAW.

Contractor shall strictly comply with all applicable federal and State laws, rules, and regulations in effect or hereafter established, including, without limitation, laws applicable to discrimination and unfair employment practices.

6. CHOICE OF LAW.

Colorado law, and rules and regulations issued pursuant thereto, shall be applied in the interpretation, execution, and enforcement of this Contract. Any provision included or incorporated herein by reference which conflicts with said laws, rules, and regulations shall be null and void. Any provision incorporated herein by reference which purports to negate this or any other Special Provision in whole or in part shall not be valid or enforceable or available in any action at law, whether by way of complaint, defense, or otherwise. Any provision rendered null and void by the operation of this provision shall not invalidate the remainder of this Contract, to the extent capable of execution.

7. BINDING ARBITRATION PROHIBITED.

The State of Colorado does not agree to binding arbitration by any extra-judicial body or person. Any provision to the contrary in this contact or incorporated herein by reference shall be null and void.

8. SOFTWARE PIRACY PROHIBITION. Governor's Executive Order D 002 00.

State or other public funds payable under this Contract shall not be used for the acquisition, operation, or maintenance of computer software in violation of federal copyright laws or applicable licensing restrictions. Contractor hereby certifies and warrants that, during the term of this Contract and any extensions, Contractor has and shall maintain in place appropriate systems and controls to prevent such improper use of public funds. If the State determines that Contractor is in violation of this provision, the State may exercise any remedy available at law or in equity or under this Contract, including, without limitation, immediate termination of this Contract and any remedy consistent with federal copyright laws or applicable licensing restrictions.

9. EMPLOYEE FINANCIAL INTEREST. C.R.S. Sections 24-18-201 and 24-50-507.

The signatories aver that to their knowledge, no employee of the State has any personal or beneficial interest whatsoever in the service or property described in this Contract. Contractor has no interest and shall not acquire any interest, direct or indirect, that would conflict in any manner or degree with the performance of Contractor's services and Contractor shall not employ any person having such known interests.

10. VENDOR OFFSET. C.R.S. Sections 24-30-202 (1) and 24-30-202.4.

[***Not Applicable to intergovernmental agreements***] Subject to C.R.S. Section 24-30-202.4 (3.5), the State Controller may withhold payment under the State's vendor offset intercept system for debts owed to State agencies for: (a) unpaid child support debts or child support arrearages; (b) unpaid balances of tax, accrued interest, or other charges specified in C.R.S. Section 39-21-101, *et seq.*; (c) unpaid loans due to the Student Loan Division of the Department of Higher Education; (d) amounts required to be paid to the Unemployment Compensation Fund; and (e) other unpaid debts owing to the State as a result of final agency determination or judicial action.

11. PUBLIC CONTRACTS FOR SERVICES. C.R.S. Section 8-17.5-101.

[Not Applicable to Agreements relating to the offer, issuance, or sale of securities, investment advisory services or fund management services, sponsored projects, intergovernmental Agreements, or information technology services or products and services] Contractor certifies, warrants, and agrees that it does not knowingly employ or contract with an illegal alien who shall perform work under this Contract and shall confirm the employment eligibility of all employees who are newly hired for employment in the United States to perform work under this Contract, through participation in the E-Verify Program or the State program established pursuant to C.R.S. Section 8-17.5-102(5)(c), Contractor shall not knowingly employ or contract with an illegal alien to perform work under this Contract or enter into a contract with a subcontractor that fails to certify to Contractor that the subcontractor shall not knowingly employ or contract with an illegal alien to perform work under this Contract. Contractor (a) shall not use E-Verify Program or State program procedures to undertake pre-employment screening of job applicants while this Contract is being performed, (b) shall notify the subcontractor and the contracting State agency within three days if Contractor has actual knowledge that a subcontractor is employing or contracting with an illegal alien for work under this Contract, (c) shall terminate the subcontract if a subcontractor does not stop employing or contracting with the illegal alien within three days of receiving the notice, and (d) shall comply with reasonable requests made in the course of an investigation, undertaken pursuant to C.R.S. Section 8-17.5-102(5), by the Colorado Department of Labor and Employment. If Contractor participates in the State program, Contractor shall deliver to the contracting State agency, Institution of Higher Education or political subdivision, a written, notarized affirmation, affirming that Contractor has examined the legal work status of such employee, and shall comply with all of the other requirements of the State program. If Contractor fails to comply with any requirement of this provision or C.R.S. Section 8-17.5-101 *et seq.*, the contracting State agency, institution of higher education or political

subdivision may terminate this Contract for breach and, if so terminated, Contractor shall be liable for damages.

12. PUBLIC CONTRACTS WITH NATURAL PERSONS. C.R.S. Section 24-76.5-101.

Contractor, if a natural person eighteen (18) years of age or older, hereby swears and affirms under penalty of perjury that he or she **(a)** is a citizen or otherwise lawfully present in the United States pursuant to federal law, **(b)** shall comply with the provisions of C.R.S. Section 24-76.5-101 *et seq.*, and **(c)** has produced one form of identification required by C.R.S. Section 24-76.5-103 prior to the effective date of this Contract.

SPs Effective 1/1/09

THE PARTIES HERETO HAVE EXECUTED THIS CONTRACT

*** Persons signing for Contractor hereby swear and affirm that they are authorized to act on Contractor's behalf and acknowledge that the State is relying on their representations to that effect.**

CONTRACTOR:
NCS Pearson, Inc.

By: James M. Hill, II

Title: Vice President

James M. Hill, II
*Signature

Date: Dec 21, 2012

STATE OF COLORADO

John W. Hickenlooper, GOVERNOR

Department of Education
Robert Hammond, Commissioner

Robert Hammond, Commissioner

Date: 12-21-2012

LEGAL REVIEW
John W. Suthers, Attorney General

By: _____
Signature - Assistant Attorney General

Date: _____

ALL CONTRACTS REQUIRE APPROVAL BY THE STATE CONTROLLER

CRS §24-30-202 requires the State Controller to approve all State Contracts. This Contract is not valid until signed and dated below by the State Controller or delegate. Contractor is not authorized to begin performance until such time. If Contractor begins performing prior thereto, the State of Colorado is not obligated to pay Contractor for such performance or for any goods and/or services provided hereunder.

STATE CONTROLLER

David J. McDermott, CPA

By: _____
Dave Grier, CDE Controller

Date: 12-27-2012

A. Summative Assessment

A.1. General Requirements

Educator Meetings. For all meetings held with Colorado educators, the Contractor is responsible for all costs. This includes all expenses for Americans with Disabilities Act compliant meeting sites, including sign language interpreters and large print as needed; Audio/Visual equipment; internet connections; beverages; snacks; and for all day meetings, lunches. If overnight stay is required, hotel rooms will be billed directly to the Contractor. Each educator receives a stipend or the district is reimbursed for the cost of hiring a substitute at the district's rate during the educator's absence. In addition, educators are reimbursed for travel expenses (mileage, tolls, etc.) and meals during overnight stays. The state of Colorado periodically develops a chart for reimbursement rates. The Contractor shall reimburse attendees based on the state reimbursement rates current at the time of the meetings. The table below presents expenditures for reimbursement.

Educator Meeting Reimbursement

	Description
Stipend or Substitute Reimbursement	$120 stipend if a non-work day for the educator **OR** reimbursement of district for hiring a substitute at the district's rate
Meal Expenses	The per diem rate will be set at the current state (CO) rate at the time of the event. It is only granted to participants who come from out of the local area and who will remain over night in a hotel provided by the Contractor. See below for more information.
Mileage	Mileage rates will be set at the current state (CO) rate at the time of the event See below for more information.
Lodging	Lodging shall only be provided for participants who travel more than 35 miles in one direction to attend the event. Government rates will be applied. See below for more information.
Airfare/Rental Cars/Cab Fares	Airfare, rental cars, or cab fare shall be provided for participants for whom these means of travel would be less expense than if they drove.

NOTE: For current Colorado rates, seehttp://www.colorado.gov/cs/Satellite/DPA-DCS/PA/1201542229293 http://www.colorado.gov/cs/Satellite/DPA-DCS/PA/1201542229293

The Contractor is responsible for recruiting educators resulting in representative committees for all educator meetings.

A.1.1. Professional Standards/Best Practices. The Contractor shall develop, under this Contract, materials, practices and procedures developed under this Contract for the Colorado summative assessments that are consistent with relevant professional standards such as those contained in the Standards for Educational and Psychological Testing published by the American Education Research Association (1999 or most current version), and the various guidance and checklist documents published by the Council of Chief State School Officers, such as the Quality Control Checklist for Item Development and Test Form Construction, particularly in terms of privacy, reliability, validity, opportunity to learn, accommodations, scoring, reporting, and documentation. If the materials, practices, and/or procedures are not consistent with such professional standards, Contractor will inform CDE of the deviations from best practices and/or professional standards as described below.

The Contractor shall inform CDE when implementation practices or policies are not consistent with the best educational research and practice standards. The Contractor shall be responsible for clearly communicating the risks of proceeding outside of conclusions of the best educational research and practice standards. If CDE elects to proceed, the Contractor shall work with CDE to design and implement appropriate mitigation strategies and, to the extent possible, identify associated risk.

A.1.2. State and Federal Requirements. The Contractor shall develop materials, processes, and procedures under this Contract that are consistent with or meet relevant State and Federal legal requirements, including requirements under the Elementary and Secondary Education Act (ESEA) and peer review, as well as the Individuals with Disabilities Education Act (IDEA). Throughout the life of the Contract, and any extensions, the Contractor shall communicate to the State when it concludes that the program or some component thereof is no longer meeting State and Federal requirements and shall provide corrective options to the State for consideration.

A.1.3. Communication. The Contractor shall assist CDE in explaining to the media, the public, stakeholders, the court, and/or other applicable entities why the tests are valid and reliable assessments that are appropriate for their intended purpose. The Contractor shall collaborate with CDE to develop external communications materials for the Colorado student assessments to promote understanding and acceptance of the new assessments.

These external communications materials may include, but are not limited to, interpretive guides which will accurately communicate information in clear language for parents, teachers and other stakeholders, related to cut scores, proficiency levels and descriptors and scale score, including how they work, why they are important, and how they can be properly interpreted. The interpretive guide will show educators how to use test results to support instructional plans.

The Contractor shall use brochures, PearsonAccess™, group training sessions, face-to-face meetings, or other appropriate formats to make assessment results available and understandable to all stakeholders. This includes helping CDE provide information to the media and to technical advisory committee members, or similar groups, for the purposes of accountability and public release of testing information.

A.1.4. Cooperation with Quality Control Contractor and CDE Staff. CDE intends to contract separately with a third-party quality control contractor for all of its assessments. The quality control contractor will review the Contractor's work, meet with the Contractor's staff, and conduct on-site visits at all of CDE's contractor's facilities to assure CDE that 1) the Contractor meets required schedules and quality control requirements and performs services in accordance with contractual requirements; and 2) file exchanges are properly coordinated. While working within its corporate and/or contractual guidelines for maintaining security of its facilities, its other clients and confidentiality of student information and data, the Contractor will cooperate with the quality control contractor and CDE staff to provide access to relevant facilities, personnel, and information regarding services provided hereunder. To the extent that quality control contractor will be provided access to Contractor's confidential or trade secret information, an appropriate non-disclosure agreement will be completed.

A.1.5. Interaction with Verification Contractor. CDE may contract separately with a third-party verification contractor on an on-going or periodic basis. While working within its corporate and/or contractual guidelines for maintaining security of its facilities, its other clients and confidentiality of student information and data, the Contractor will share information regarding item parameters; data files (including scan files and command files); and any other information needed to verify the reliability, validity, and quality of the Colorado assessment data and system. To the extent that verification contractor will be provided access to Contractor's confidential or trade secret information, an appropriate non-disclosure agreement will be completed.

A.1.6. Security. The Contractor shall follow the federal Family Educational Rights and Privacy Act (FERPA), state, and industry standard security policies, including the provision of confidentiality agreements for all Contractor staff, subcontractors and educators participating in any aspect of this project.

Any breach of security that occurs through the negligence or inaction of the Contractor, such as, but not limited to, failure to adhere to the Contractor's security protocols or allowing raters to remove secure materials from Item Writing Meetings, Item Review Meetings, Data Review Meetings, Anchor Paper Selection, Validation Meetings, or the Scoring Center, will be considered a default on the terms of this Contract.

The Contractor will be required to sign the FERPA Confidentiality Agreement.

Commitment to Stringent Security

The Contractor's Global Information Security and Technology policy shall be implemented by the Contractor's business unit leaders in collaboration with the Director of the Data Security and Business Continuity (DSBC) team. The DSBC shall implement policy and verify compliance through appointed data security/privacy officers located in all of the Contractor's facilities. Specific focus areas include policy guidance, security procedure training, access and transmission controls, audit activities, and resolution of security issues.

Established and Secure Facilities

All of the Contractor's facilities shall be closed to the general public. Reception areas shall be staffed, and access beyond the reception area shall be restricted, as it shall be with other building entrances. Guards shall be posted at other key entrances where security officers monitor building access directly and via a closed circuit television system. Building access shall be controlled by a proximity card access system. Employees and contractors shall be issued magnetized, photo ID badges after signing a statement accepting responsibility for its proper use. While in the Contractor's facilities, personnel shall be required to wear the security badge in unobstructed view at all times. Visitors to the Contractor's facilities must be approved by a manager, escorted by the Contractor's staff, and wear date-specific badges.

Information about Security Awareness

The Contractor shall continue its Security Awareness Program, an ongoing effort that provides guidance to every employee so they understand company security policies, their individual responsibilities for compliance, and how their behaviors affect The Contractor's ability to protect systems and data. These efforts are built on the principles of confidentiality, integrity, and availability. Security awareness begins immediately with new hire orientation, covering acceptable use of the Contractor's systems, fundamental best practices such as creating strong passwords, proper use of email and Internet access, and responsibilities in reporting security risks. The Contractor's employees shall be required to complete a web-based training module within 30 days of hire.

Specific online courses covering Payment Card Industries (PCI) compliance and protecting personally identifiable information (PII) have also been developed. The Contractor's awareness training shall also include an annual refresher course that includes components on these topics. Pearson security policies, security training, newsletters, and printed content shall be available on the Security Department intranet site. It provides a central repository for security content and efforts and is available to

everyone in the company. Links to this site are incorporated in most of the Contractor's other business specific Intranet sites.

Employee Handling of Test Materials

The Contractor's test-development methodologies prevent the listing all of the employees who will develop and process Colorado summative materials; however, the Contractor stipulates that only those employees explicitly assigned to the project handle testing materials, and that these employees will be required to complete a nondisclosure/security form.

Confidentiality Agreements

During item development and item review, range finding and anchor validations, as well as standard setting, the Contractor will have all participants sign a confidentiality and nondisclosure agreement. The Contractor will communicate security protocols to all participants. Participants will not be allowed to remove material from the meeting room during any development or review sessions nor will they be allowed to use personal computers, cell phones, or other communication devices within the meeting environment.

Secure FTP Site for File Transfers

The Contractor will develop and maintain a secure file transfer protocol (SFTP) site for the duration of the Contract and any future amendments. This site will be fully-encrypted and allow for secure transfer of documents between the Contractor and CDE, and any third party vendors. The Contractor will not utilize email or fax for transmission of secure materials or information.

User IDs and Passwords

The Contractor's security module will provide administrative user authentication and authorization services. CDE will be provided control of administrative security features, including: persons allowed to access the system; what level of the system (state, system, school) each user can access (customized to match the naming convention for levels used by CDE); and which administrative functions (enrollments, student data management, order tracking, viewing reports, etc.) each user is permitted to access.

Secure Materials Assembly

To maintain test booklet security, the Contractor will perform the pre-packaging and assembly processes in accordance with CDE requirements and its standard security procedures. Only designated, authorized persons will have access to test materials before and after their scheduled use. All security processes described in the following sections work in concert with Oracle's system inventory controls to produce accurate packing results and inventory traceability. The Contractor will check materials to verify that they have been accurately printed and collated, wrap test booklets into sub-assembly components of a predetermined number of documents and identify them using unique package barcode identifications, and perform a quality check during packaging to verify that the item counts listed on the packing lists correspond with the actual test booklets being packaged. At the packing line, scanners will prompt the packing personnel for which item to scan, in the order in which it must be packed. The Contractor's packaging and distribution system will use custom technology to verify packaging and distribution accuracy through barcode scanning of individual testing materials to their specific shipping container.

Secure Delivery of Test Materials

The Contractor's plan for the distribution and return of materials will focus on maintaining test security, providing accurate handling of all test assessment materials, and delivering these materials to the participating districts in a timely manner. The Contractor's experienced warehousing and transportation departments will maintain the quality and security of material distribution and return materials by using such methods as sealed trailers and hiring reputable carriers able to quickly trace shipments.

Accurate Handling and Timely Delivery

To maintain test security, accurate handling, and timely delivery, the Contractor will create a transportation file consisting of requested quantities of each material type (secure or non-secure) along with calculated overages for each participating school within each district. The Contractor will identify appropriate shipping modes based on shipment size and destination. The Contractor will verify shipping addresses for validity according to carrier files.

Materials will ship directly to the district test coordinators responsible for distributing testing materials to the schools, arriving at least two weeks prior to testing. The Contractor will also use its distribution system's tracking capabilities to provide precise status information and immediate opportunities for corrective action. As returned secure materials are returned, the Contractor will compare the barcodes of the documents sent to a district to those returned from a given location. The Contractor will provide regular updates to CDE on the status of any unreturned secure materials. The Contractor will generate and deliver a report of any unresolved missing materials to CDE after the scoring window has closed, and after the Contractor has made every effort to locate any missing materials.

Inventory Security

The Contractor will use its automated material inventory system, located within secure warehouse facilities, as the primary security system for all test materials following development (test booklets, test sections, and Supported Performance Task manipulatives). The inventory system will provide an accurate control process that supports the controlled shipment and return of test materials.

Secure Destruction of Materials

The Contractor will provide for the secure destruction of all materials used during test development, committee meetings, and field testing. Annually, the Contractor will provide secure destruction of secure unused test materials six (6) months after the end of the test window, with written permission from CDE. Additionally, the Contractor will provide secure destruction of used test materials twelve (12) months after the test administration window closes, with written permission from CDE.

Solid Security for Colorado

The Contractor will follow stringent procedures in the event of any major data security breach. The Contractor will respond quickly to any suspected breach. Actions the business must take promptly after an actual or suspected breach include the following to contain the breach and investigate the cause:

Determine timing requirements:

- Promptly record all information relevant to the breach, including the cause and effect of the incident and determine whether other systems are at serious risk of future breach.
- Engage specialized consultants to capture relevant information and perform forensic analysis if necessary.
- Follow prescribed legal time limits for notification of persons whose data was breached, if applicable.

Information to be collected promptly:

- The date, time, duration and location of the breach.
- How the breach was discovered, by whom and any known details about it.
- Information on the compromised data, including: a list of affected individuals by category, data fields, the number of records affected and which, if any, data were encrypted.

Analyze legal implications of the breach:

- Analyze the relevant business contracts for notification and other obligations, breach notification requirements and pertinent indemnification agreements.
- Identify the countries potentially involved with reference to the location of persons and systems affected by the breach and statutes and regulations potentially triggered or violated by the breach.
- Contact local or federal law enforcement agencies, where appropriate.

Working in Concert with CDE

The Contractor's program manager will work with CDE to determine final test administration procedures, including those related to security and confidentiality throughout administration. These will then be included in test manuals and incorporated into test coordinator and administrator training. In addition, a detailed plan for handling general testing irregularities will be developed with CDE that identifies potential types of irregularities, reporting and communications plans, and immediate actions to resolve or mitigate the situation.

A.1.7. Travel. Contractor will be required to travel to various statewide locations to meet project requirements/training.

All anticipated travel expenses are included in the Contract price. The total price quoted for this project includes any travel, lodging or per diem costs to be incurred by the Contractor's personnel to provide services requested. NO ADDITIONAL COSTS WILL BE REIMBURSED.

A.1.8. Subcontractor Requirements. CDE is allowing subcontracting to occur in the scope of work. CDE will allow subcontracting only under the following circumstances:

- All subcontractors must have primary offices and complete the work within the continental United States.
- CDE reserves the right to reject any subcontractors if it so chooses. Approval of a subcontractor may be rescinded throughout the life of the contract upon 30 day notice from CDE. Mutually agreed upon transition, mitigation and contingency plans will be developed and implemented.

A.1.9. CDE Sign Off. All procedures followed in the development, production, administration, scanning, scoring and reporting of the Colorado summative assessments shall be made available for review by CDE, if requested, and, as determined by CDE, may be subject to CDE approval.

A.2. Corporate Capacity and Personnel

Throughout this document, the term Contractor(s) is assumed to include subcontractors where appropriate and applicable.

If the Contractor has discovered fault with a subcontractor that may impact a CDE deliverable, the Contractor has the obligation to inform CDE immediately. Appropriate steps must be taken by either the subcontractor or the Contractor to correct the problem prior to that problem resulting in substandard performance or non-compliance. The Contractor shall remain responsible for the performance of its subcontractors.

A.2.1. Organizational Structure. Organizational charts including identification of Executive and Key Personnel, for the Contractor as a whole and for the CDE project team specifically, including subcontractors where applicable are provided in Attachment 1. The chart indicates lines of authority and communication within and among the Contractor's departments and subcontractors, where appropriate.

The Contractor has indicated that executive team member directly in charge of overseeing the Colorado project shall be Jim Hill, Vice President of State Services with the Assessment and Information group, who will provide executive support for the summative assessments. This executive team member shall be available both during and outside normal business hours to assist with any urgent situations. Changes to the assigned executive team member, except for those resulting from separation of services, require prior written consent by CDE. The replacement shall have qualifications which meet or exceed the original staff member proposed or the staff member holding the position previously and shall be approved by CDE.

A.2.2. Time Allocation of Key Personnel and Services. Attachment 2 presents the list of key staff with staff member's assigned responsibilities and time allocated to the project. In no case shall an individual be assigned to more than one full-time equivalent position, including work outside of Colorado contracts.

The Contractor shall assign one person to function as the Program Manager for the summative assessments. That person must be responsible for all activities required by the project and will serve as the main contact person between the Contractor and CDE. The Program Manager shall have the authority to make decisions and commitments on behalf of the Contractor, subject to CDE approval.

The Contractor's technology consultant shall be responsible for a number of tasks, including but not limited to, assisting CDE and the districts with the transition to online assessment; working with CDE information staff to facilitate the accurate and efficient transfer of data to and from CDE; creating, defining and reviewing file layouts; providing assistance in the verification of demographic data; and assisting CDE and district assessment coordinators with the use of Contractor websites and functionality. Ideally this person will be located in the Denver area. At a minimum, this person will be available to be on-site within 24 hours at the request of CDE. Outside of the installation and testing window, this person's availability may be more flexible; however, during the actual installation and testing window, this person must be immediately available with little to no notice.

CDE reserves the right to interview and approve all key staff including subcontractor staff. Throughout the life of this Contract, and any extensions, changes to the assigned program manager, program coordinator, lead psychometrician, content development lead, content- specific area lead, special populations consultant, and technology consultant, except for those resulting from separation of services, shall require prior written consent by CDE. In the event that CDE requests removal of specific Contractor personnel, the Contractor shall provide acceptable replacement(s) with no impact to the project. Replacement(s) shall have qualifications which meet or exceed the original staff member proposed or the staff member holding the position previously and shall be approved by CDE.

All personnel who will work on-site at CDE or school sites may be required to be pre-approved for site access via a criminal background check paid for by the Contractor.

A.2.3. Staff Qualifications and Experience. CDE requires that the Contractor's psychometric team will not only execute routine functions, but will provide expertise to guide the psychometric decisions that will need to be made and re-evaluated as the program evolves. The team shall provide psychometric options with strengths and challenges and its recommendations along with rationale. The team shall include Jon Twing, who has extensive experience and psychometric knowledge, as well as the decision-making authority to quickly address and remedy unexpected challenges.

For all meetings involving educators, facilitators must be familiar with best practices, state and federal laws, procedures, and regulations concerning assessment. Facilitators must also be familiar with academic instruction of students and the educational and assessment landscape. Facilitators must be able to clearly articulate spoken English and create easily understood written materials and visual training aids. Facilitators must have demonstrated successful experience in leading large-group trainings including webinars and meetings as fit their responsibilities. CDE reserves the right not to accept any training and meetings facilitators identified if it so chooses.

A.3. Program Management

A.3.1. Key Activities and Transfer Dates.

A.3.1.a Schedule of Activities.

The Contractor shall adhere to the schedule of key activities included in Exhibit B, Summative and Alternate Assessment Schedule, related to the field and key transfer dates between the Contractor and CDE related to development, production, shipping and receipt, administration (of paper-based and online assessments), scanning, scoring (human and artificial intelligence), data processing, reporting and psychometric activities. The Contractor shall adhere to the mutually agreed upon detailed schedule that outlines the tasks and durations for each year of the Contract. The deliverables presented in Exhibit C, Liquidated Damages Dates, shall be subject to liquidated damages as set forth in Paragraph XXI.S and Exhibit C of the Contract.

A.3.1.b Project Schedule.

The Contractor shall follow the baselined project schedule presented to CDE at the beginning of each development cycle that identifies the tasks, subtasks, beginning date, end date, party/functional group responsible for each step in the process, dependencies, detailed hierarchical task descriptions, critical milestone designations and early trigger and milestone identification. The schedules shall

be integrated, regularly reviewed, updated, and made available to project stakeholders in a clear and understandable format. The overall schedule shall be incorporated into the comprehensive project management plan. Management of the master schedule shall include identifying and communicating tasks and deliverables, tracking and communicating progress, evaluating the status and availability of resources, and identifying project and program managers, resource managers, team members, and executives.

The Contractor's project schedules will be developed with Microsoft Project® software, according to a clearly defined and highly integrated process. CDE schedules shall be carefully monitored by Contractor's program team to verify that resources will be available when they are needed. Assessment projects shall be run according to schedule. The Contractor shall use its standard, comprehensive work breakdown structure (WBS) as the basis for every assessment schedule. The WBS is extensive and detailed, featuring every common element of work the Contractor and CDE perform to fulfill the requirements of an assessment projects. The WBS shall be carefully managed throughout the project to keep track of schedule elements. The Contractor's program management staff shall be required to submit weekly updates to the Colorado Student Assessments project manager. Any variations in scheduled start dates or projected task durations shall be seen immediately by the Colorado Student Assessments project manager and appropriate corrective action shall be initiated without delay.

The Contractor and CDE shall jointly monitor the schedule on an ongoing basis. The Contractor shall manage schedule adjustments such that final deliverable dates will be met. If necessary, timelines and schedules may be revised with prior approval by CDE and by an executed Contract amendment for all deliverables subject to liquidated damages. A revision of the Contractor's timeline shall exempt the Contractor from meeting a contractual deadline **only if** (1) the Contractor and CDE mutually agree upon and document through an executed contract amendment an extension of the deadline or (2) the Contractor is able to prove that the deadline was not met due to CDE's failure to meet a contractual deadline resulting in the Contractor's inability to adhere to the schedule for delivery of products and services.

The Contractor shall alert CDE as soon as it believes that a deliverable subject to liquidated damages is at risk of not meeting its delivery date. CDE must be notified whenever the Colorado Contract is included in the Contractor's internal meetings focused on programs at-risk.

A.3.2. Program Management Communication and Reports.

A.3.2.a. On-going Communication. The Contractor shall engage in on-going communication with CDE. Telephone calls, telephone conference calls, emails, overnight courier service, facsimile correspondence, and other communication procedures will be at the Contractor's expense. The Contractor shall provide toll-free numbers for telephone communication including conference calls and webinars.

The Contractor shall include CDE in all communications with subcontractor, written or oral, regarding subcontractor risk analysis, mitigation strategies and contingency plans related to the services and deliverables provided under this Contract. In addition, CDE shall be able to participate during all Colorado

related reoccurring meetings and formal, non-proprietary trainings between the Contractor and the subcontractors identified in this Contract. With prior notification to the Contractor, CDE reserves the right to contact the subcontractor directly regarding subcontractor risk analysis, mitigation strategies and contingency plans inviting the Contractor to participate in these communications.

A.3.2.b. Timeliness of Communication. The program management team shall return calls from CDE staff and respond to email messages within 24 hours. If the program manager is not available to take calls and return messages, CDE shall be notified in advance. In the event that a member of the program management team is not available, the Contractor shall notify CDE as to whom to contact in his or her absence, and shall provide contact information for such individual. The Contractor's program manager shall use multiple means to maintain constant and ongoing communications with CDE: email, cell phones, SFTP sites, faxes, conference calls, WebEx conferences, and other means that support the immediacy or urgency of the communications topic, as well as regularly scheduled communications meetings. The Contractor's program manager shall be responsible for ensuring that the appropriate members of the Contractor's team are available for or participate in such communications. The Contractor's program manager and program team shall maintain records of all meetings, minutes, or summaries, including those with subcontractors, and shall make those available to CDE upon request.

CDE shall participate in meetings and trainings as appropriate or as required. To keep CDE fully informed, the Contractor shall use standard communication (phone and e-mail), direct access to the Contractor's leadership, and online access to calendars and schedules. These methods of communication shall be employed to make decisions and provide information to various CDE constituencies. Executive level issues shall be immediately referred to Mr. Hill.

A.3.2.c. Weekly Meetings. At a minimum, the Contractor shall schedule weekly conference calls and reports with CDE at a designated time. Program details shall be discussed, including requirements, the schedule, issues, and work updates. As the need arises, other periodic or ongoing conference calls may be conducted. From each conference call, an updated issue log shall be created noting a discussion summary, action items, information needed for program success, dependencies, and key dates from the schedule. The Contractor shall distribute this report to CDE and throughout its company. This report shall be submitted to CDE within two business days of the conclusion of each meeting.

A.3.2.d Project Meetings. The Contractor shall be responsible for the coordination, support, and expense of regular management meetings with CDE's assessment director(s) and team. For the Contract period running through June 2014, the Contractor shall hold monthly planning or work sessions to confirm that all baseline and start-up details are being closely monitored and on-track. Four (4) of these meetings shall be hosted at the Contractor's facilities and the others shall be held in Denver, CO. The Contractor shall prepare draft agendas for CDE review and approval and shall verify that appropriate members of the Contractor's teams attend in person or are available via electronic meeting technologies.

Dependent upon contract extension beginning in SFY 2015 for each of the remaining fiscal contract periods, through August 30, 2017, the Contractor shall

meet with CDE every other month (six (6) times annually), with three (3) of these meetings in Denver and three (3) at the Contractor's facilities. The Contractor shall confirm appropriate attendance by pertinent team members. CDE shall be responsible for the costs for its staff to travel to the Contractor's location.

The Contractor's project management team shall collaborate with CDE to identify topics for each meeting. The Contractor shall provide a draft agenda for each meeting to CDE for review. The Contractor's program manager shall work with CDE to develop general formatting and content guidelines for the meeting agendas.

In addition to the in person meetings, the Contractor shall coordinate management meetings via WebEx or teleconferencing through a toll-free number. The Contractor shall be responsible for providing written documentation for all meetings with special attention given to deliberate decisions, actions required, and personnel needed for follow-up. This documentation shall be submitted to CDE within two days of the conclusion of each meeting.

The Contractor shall organize several additional meetings throughout the year. For all meetings— including, but not limited to management meetings, item reviews, alignment studies, range finding meetings, standard settings, and technical advisory groups—the Contractor shall take minutes and make a record of participants, including institutional affiliation and contact information. The Contractor shall provide all minutes, records, and lists of participants to CDE for review and approval within two working days after each meeting. The following figure shows more details about the Colorado Student Assessments face-to-face meetings. Additional Contractor staff shall be available as necessary.

Colorado Summative Assessments Project Meetings					
	TAC Members	**CDE Staff**	**Contractor/ ETS Staff**	**Meetings per Year**	**Number of Days**
Technical Advisory Committee (State TAC)	4	8	3	3	2
Contract Kick off Meeting		6	12	1 total (Upon contract award)	2
Annual Planning Meeting		6	4	1	2
Start-Up Project Meetings		6	4	2	2
Planning/work sessions		6	4	12 (Fiscal Years 1-2) Dependent upon contract extension: 6 (Fiscal Years 3, 4, 5)	2

Colorado Summative Assessments Project Meetings					
Quarterly Upper Management Project Meetings		4	4	4	1

A.3.2.e. Monthly Reports. The Contractor shall provide a monthly report to CDE. The monthly reports shall address important issues affecting the Colorado Student Assessments and provide the information CDE needs to maintain close oversight. Each report shall include information on items such as the following:

- Unanticipated difficulties and proposed solutions
- Feedback from CDE, districts, and schools
- Discussion of unresolved topics
- Decisions needed from CDE
- Status of tasks in progress as compared to the baseline schedule for the summative assessments
- Anticipation of key decisions and issues affecting those decisions
- Preparations for upcoming tasks/events
- Potential impact of specific actions

The monthly report shall also include a detailed list of invoices submitted for payment and a history of invoices previously submitted. These reports shall be sent monthly to CDE by the third business day of the following month.

A.3.2.f. District Assessment Coordinator (DAC) Academy. The Contractor's program manager and the project manager for the Colorado project shall attend the annual DAC Academy. They will either travel to Denver prior to one of the in-state project meetings, or will remain in Denver following the project meeting to be present.

A.3.2.g. District Assessment Coordinator (DAC) Management Meeting. The Contractor's program manager and the project manager shall attend the two DAC management meetings each year. They will gather input from the DACs regarding any suggestions for changes to administration procedures or practices. Any changes suggested by the DACs will require CDE approval before implementation.

A.3.2.h. Program Improvement Plans. The Contractor shall use feedback garnered from pre-test, mid-assessment, post-test workshops, the program review, educator meetings, and yearly performance evaluations to improve all aspects of the Colorado Student Assessments. Based on feedback from Colorado educators, DACs, and CDE, the Contractor shall identify solutions for improvement via post phase review meetings, provide a plan for improvement based on "lessons learned," at each planning meeting allow for time on the agenda to discuss Colorado Student Assessments improvements, identify training needs based on feedback from educators and with guidance from CDE, and collaborate with CDE on technology capabilities.

For each phase of the program including development, production, shipping and receipt, administration (of paper-based and online assessments), scanning, scoring (human and artificial intelligence), data processing, reporting and psychometric activities, the Contractor shall provide a report that addresses the

relevant phase by detailing the activities completed and by providing recommendations for improvement for the next assessment cycle. The report shall also detail errors, problems, and/or discrepancies by district and by school. The Contractor shall prepare a comprehensive report detailing the annual assessment cycle and providing recommendations for changes and improvements. This report shall incorporate feedback from a range of Colorado constituents, the Technical Advisory Committee (TAC), and members of the Contractor's project teams, allowing CDE to fully analyze such recommendations before making decisions or adjustments. This report shall be completed within one month of completing the relevant phase. Final approved decisions shall be incorporated into the next year's project plan and communicated to the full project team.

A.3.2.i. Quality Control and Sign-Offs. Reviews and signoffs for all deliverables shall be documented and available to CDE upon request. The quality control plan, which shall be included in the program plan, shall be finalized in conjunction with CDE and will incorporate responsible entities, timelines, staff involved in the quality control procedures at each phase and deliverable of the project and CDE involvement in sign-off and approval at various stages.

A.3.2.j. Invoices. The fiscal year term for Colorado shall begin on July 1 and end on June 30. The Contractor shall submit invoices according to the procedures and requirements set forth by CDE. The Program Management Plan will include invoice dates to reflect that, for each fiscal year, invoices are to be submitted quarterly, plus one final invoice. Invoices shall cover work, services, and deliverables provided during the period. Final invoices for each fiscal year shall be submitted by June 15 and the final invoice for each assessment cycle will be submitted by August 15 of each year.

A.3.3. Transition. The Contractor shall assist CDE with all activities required to transfer all assessment documents and materials created and/or completed for the Colorado program (i.e., CDE owned) during the transition phases. The Contractor's staff shall work with Colorado's current contractor to confirm that all existing Colorado assessment materials are transferred on time and that the materials retain their intended content and formatting. The Contractor shall perform a quality assurance check on materials received from the existing contractor and will notify CDE of any materials not delivered as expected.

The Contractor shall facilitate the efficient transfer of all relevant CDE owned documents and materials under its control, including but not limited to those identified in the following list among CDE, the current contractor, the Contractor and CDE's future contractor(s):

- Test development – all critical documents and materials used in the test development process;
- Item and test specifications – all item format details, test map requirements, test blueprints, and technical reports;
- Test books –all paper and electronic test booklets and electronic answer documents from previous test administrations; test maps for each form from the previous year's administration with keys and metadata;
- Passages and artwork – all photocopies of the original passages with source documentation, copies of contracts, original electronic art files and applicable permission information;
- Item bank, item and test statistics – all item-level metadata and previous usage statistics, available test-level statistics, and previous operational and field test usage of each item year and form item position status;

- Program administration – all critical documents and materials used with the test administration process;
- General program documentation – all critical documents and materials used for general program documentation and summary reports;
- Reports – sample copies of all reports provided to districts and schools;
- Manuals/guides – sample copies of all guides and manuals (hard copy and electronic versions) for the operational test administrations, and copies of all electronic materials posted on the state website during the operational test administration;
- Scoring information – all critical documents and materials used in the scoring process;
- Scoring/reporting specifications – all documentation regarding scoring rules, aggregation rules, roll-up algorithms, and tables used to calculate student, school, district, and state results;
- Psychometric and related assessment information required for the program – all critical documents and materials used for psychometric analyses and related procedures;
- Professional development – all critical documents and materials used for professional development;
- Editing Specifications – all documentation that outlines how the state would like answer documents edited during the scanning process;
- Data file specifications – all documentation that outlines layouts for files including master file, pre-id, school/district score data and state-level score data;
- Performance scoring specifications – all training papers, anchor sets, calibration papers, rubrics, and constructed-response scoring rules; previous year's score distributions for each item and historical reader agreement rates;
- Technical and other reports – all electronic copies of technical reports produced by the Contractor and electronic copies of any other reports produced by the Contract that document the validity or reliability of the assessments;
- Project plan – all documents that outline the tasks/deliverables and corresponding schedule for those tasks/deliverables;
- Schedules – all previous project schedules containing dates/durations for the following tasks:
  - Developing items, forms, and materials
  - Enrollment and pre-identification
  - Packaging and distribution
  - Receiving and scanning
  - Scoring and reporting
- Packaging specifications – all documentation concerning packaging algorithms and shipping points; and
- Print specifications – all spreadsheets detailing print specifications for test booklets, scannables, answer documents, labels, envelopes, and manuals.

The Contractor shall assist CDE with all activities required to transfer all CDE owned assessment documents and materials during the two transition phases. Draft Transition Plans shall include procedures for the transition of documents and materials related to the following:

- Program administration – The Contractor shall facilitate the efficient transfer of all critical documents and materials used with the test administration process between CDE and/or contractors.

- Test development – The Contractor shall facilitate the efficient transfer of all critical documents and materials used in the test development process between CDE and/or contractors.
- Scoring information – The Contractor shall facilitate the efficient transfer of all critical documents and materials used in the scoring process between CDE and/or contractors.

- Psychometric and related assessment information required for the program – The Contractor shall facilitate the efficient transfer of all critical documents and materials used for psychometric analyses and related procedures between CDE and/or contractors.
- General program documentation – The Contractor shall facilitate the efficient transfer of all critical documents and materials used for general program documentation and summary reports between CDE and/or contractors.
- Professional development – The Contractor shall facilitate the efficient transfer of all critical documents and materials used for professional development between CDE and/or contractors.

A.4. Assessment Development

A.4.1. Work Plan. The Contractor shall develop and present a work plan annually for approval by CDE. The Contractor shall adhere to the mutually agreed upon detailed schedule that outlines the tasks and durations for each year of the Contract. The draft schedule is included in Exhibit B. Colorado has determined that this Contract will cover the content areas of Science and Social Studies with the option of later adding the content areas of English Language Arts (Reading and Writing), and Mathematics.

The Contractor and CDE shall collaborate at each major phase in the test development process to produce assessments that meet test specifications and are in line with CDE expectations.

The Contractor shall conduct an internal audit for the summative assessments at least once during the Contract period to review past performance and identify any areas for improvement to facilitate Contractor's production of superior test development results.

A.4.2. Content.

A.4.2.a. Determining Eligible Content. The Contractor shall provide a document of eligible content for the summative assessments. This document shall synthesize the eligible content identified in the Colorado Academic Standards. Should Colorado proceed with English language arts (reading and writing), this document will also synthesize the eligible content identified in the Colorado Academic Standards with the Common Core State Standards, as well as the guidelines outlined by the two multi-state consortia (i.e., Smarter Balanced Assessment Consortium (SBAC) and Partnership for Assessment of Readiness for College and Careers (PARCC)) most appropriate for Colorado students. The Contractor shall outline which standards are assessable and suggest appropriate item formats for each assessable standard. The Contractor shall be responsible for providing a finalized document for CDE's director of assessment approval.

A.4.2.b. Claims and Reporting Categories. The Contractor shall work with stakeholders to develop clear and meaningful claims about students' knowledge and skills that shall serve as the basis for Colorado's summative assessments. Based on these claims, the Contractor and CDE shall collaborate to determine reporting categories and sub-score categories for each assessed subject. The Contractor shall be responsible for providing a finalized document for CDE's director of assessment approval.

A.4.2.c. Frameworks. The Contractor shall provide draft assessment frameworks. The Contractor shall provide refined frameworks to be reviewed by the field and revised by CDE. These frameworks shall consist of eligible content, scalable reporting categories and item type distribution. The Contractor shall be

responsible for providing a finalized document for CDE's director of assessment approval.

It is CDE's intent to assess the breadth and depth of the standards each year to the extent possible given the restrictions of a state assessment.

A.4.2.d. Development of Performance Level Descriptors. The Contractor shall develop draft general and grade level specific Performance Level Descriptors (PLDs) for the summative assessments for CDE review. General descriptors shall demonstrate a progression of increasing knowledge, skills, and abilities appropriate for differentiation between performance levels. Grade level and content specific PLDs shall expand the general PLDs to identify specific knowledge, skills and abilities specific to the content standards appropriate for each performance level. The PLDs shall also inform development of item specifications and future item writing and shall be used in the standards setting process to support the validity and defensibility of the entire assessment system.

The Contractor shall provide refined PLDs according to the following plan:

- Standard Setting will follow the first operational administration of each content area assessment
- Contractor's content subcontractor (ETS) proposed Performance Level Descriptor (PLD) development plan is as follows:
  - ETS will develop draft PLDs for CDE review for the subjects being developed under this Contract
  - CDE will review and provide feedback to the Contractor and ETS
  - PLD review meeting to be held during Teacher Item and Bias Review Committee Meetings or virtual meetings with Teachers in summer
  - Make updates to PLDs following Teacher Review meeting
  - Post on the web for district review
  - Finalize PLDs at Standard Setting

The Contractor shall be responsible for providing a finalized document for CDE's director of assessment approval.

Five levels of PLDs should be used, patterned after PARCC for summative and outlined with the following descriptions:

Summative
Level 5: Distinguished Command (tentative)
Level 4: Strong Command (tentative)
Level 3: Moderate Command (tentative)
Level 2: Partial Command (tentative)
Level 1: Minimal Command (tentative)

A.4.2.e. Item Types and Test Blueprints/Specifications. The Contractor shall offer guidance to assist CDE in keeping the summative assessments meaningful for students and to provide an item bank that will support form construction for the years of the Contract period. After developing the test designs, the next step in developing fair, valid, and reliable tests shall be to develop high-quality test blueprints and test specifications targeted to the Colorado Academic Standards.

The Contractor shall work with CDE to revise the test blueprints and test specifications well in advance of the first implementation of the new summative assessment to assess the Colorado Academic Standards. Blueprints and specifications must be finalized and approved so they inform item development, followed by test forms construction. The Contractor's assessment specialists shall collaborate with CDE in the continuation of the process needed to complete the new test blueprints and full test specifications. These final test blueprints and test specifications shall become the guiding documents for the revised assessment program.

Test blueprints shall include the following information, at a minimum:

- The number of items of each item-type, by grade-level, and content area
- The number of items and score points per reporting category, standard, grade level expectation, and, where appropriate, nature of science
- The number of items in each eventual test form (operational and field test slots)
- The required number of items addressing each depth of knowledge level

The Contractor shall deliver the blueprints for each content area and grade level in whatever format best suits CDE, including but not limited to Microsoft Word or Excel spreadsheet formats.

Revised blueprints and test specifications shall include the following item types:

- Single correct response, including selected response and "griddable" items (regular and innovative, interactive technology-enhanced). These items should be designed to assess the highest content knowledge and cognitive complexity that can be appropriately measured through these types of items.
- Selected response: typically items that are presented with several answer choices, one of which is correct. Students are asked to select the correct answer. In terms of functionality, this includes drag and drop and hot spot items.
- "Griddable" response: single number or single word/phrase responses which are easily machine-scored without extensive engine training.
- Short constructed response (regular or innovative, interactive technology-enhanced). These are items in which students write a response to a question or a prompt. Student responses consist of 1) one to five sentences, 2) written work in solving problems, 3) drawing or 4) another response that typically can be provided in five minutes or less. These items typically require artificial intelligence or human scoring.
- Extended constructed response (regular or innovative, interactive technology-enhanced). These are items in which students write a response to a question or a prompt. Student responses consist of one to several paragraphs. Student responses typically can take approximately 20 minutes.

Science simulations and social studies performance events will include a variety of item types.

After CDE has approved the blueprints, the Contractor shall provide revised test specifications for review and approval. The Contractor shall provide these test specifications in whatever format CDE finds most useful, such as Microsoft

Word documents or an Excel spreadsheets. The test specifications shall include the following, at a minimum:

- The definition of the content of the assessment
- The proposed number of items for the test
- The arrangement of items and components of the test
- The desired psychometric properties of the items
- The arrangement of items and components of the test
- Item usage (such as field test, operational, and anchor)
- The item type
- The content domain
- The number of score points per reporting category
- The number of test sessions and approximate time requirements for each assessment
- The standard, grade level expectation, and evidence outcome, as well as nature of science statement and Next Generation Science Standard as applicable
- Psychometric targets
- New development by item type to compensate for refresh and release rates on forms

A.4.2.f. Design. The Contractor shall work with CDE to create an agreed upon test design. The Contractor's draft test design is below.

	Stand Alone Selected Response*	Stand Alone 2 point Constructed Response*	Stand Alone 3 point Constructed Response*	Simulations for science Performance Events for social studies	Embedded Selected Response	Embedded 2 point Constructed Response	Embedded 3 point Constructed Response	Embedded 8 point (2 dimensions) Extended Constructed Response
Science Field test	13	2	2	2	4	4	0	0
Science Operational	33 (6 embedded field test)	4 (1 embedded field test)	3 (1 embedded field test)	5 (1 embedded field test)	10 (2 embedded field test)	10 (2 embedded field test)	0	0
Social Studies (grade 4, 7) Field test	14	0	3	1	3		3	0
Social Studies (grade 4, 7) Operational	36 (6 embedded field test)	0	7	2 (1 embedded field test)	6 (3 embedded field test)	0	6 (3 embedded field test)	0
OPTION 1 Social Studies (high school) Field test	14	0	3	1	3	0	3	0

OPTION 1 Social Studies (high school) Field test	36 (6 embedded field test)	0	7	2 (1 embedded field test)	6 (3 embedded field test)	0	6 (3 embedded field test)	0
OPTION 2 Social Studies (high school) Field test	14	0	3	1	4	0	0	1
OPTION 2 Social Studies (high school) Operational	36 (6 embedded field test)	0	7 (2 embedded field test)	2 (1 embedded field test)	8 (4 embedded field test)	0	0	2 (1 embedded field test)
	*20% technology enhanced in Year 1, 25% technology enhanced ongoing							

The Contractor shall provide a final design to be reviewed and revised by CDE. The Contractor shall be responsible for providing a finalized document for CDE's director of assessment approval.

A.4.3 Item Development. CDE shall own the items developed under this Contract. In the event that CDE wants to share items with and/or license items to/from other states, the conditions around usage of those items would be controlled by the specific licensing agreement by state(s). The following sections provide detail of the requirements to be followed in the development of the Colorado summative item bank.

A.4.3.a. Sample Items. In Colorado's SFYs 2013 and 2014, the Contractor is responsible for providing sample items of each item type to be used on the operational assessment for each grade level and content area being assessed under the Contract. CDE will share the sample items provided by the Contractor with the public, so the items must be available for this purpose. Samples that were provided by the Contractor in the response to the request for proposals shall be owned by CDE.

A.4.3.b. Prototypes and Cognitive Labs. The Contractor shall collaborate and work with CDE to develop a customized Cognitive Lab Protocol (i.e., a script) and related materials for observers, along with the test items, to answer specific research questions on both the usability of the test items and the cognitive processing that the test items elicit and how this matches the intended constructs of the items. The Contractor shall conduct two sets of cognitive labs during the 2013 Field Test administration. The primary purpose of these studies shall be to collect information on students' cognitive processing and how these align with the intended constructs of the model. To accomplish this, four technology enhanced item (TEI), simulation, or performance event tasks each shall be selected for Science and Social Studies and tested across three grade levels (i.e., 4, 7, and high school for Social Studies; and 5, 8, and high school for Science).

A.4.3.c. Item Specifications and Style Guides. The Contractor shall develop specifications for each type of item and artwork to be created for the summative assessments. The Contractor shall work with CDE to prepare a Colorado Style Guide that will be followed by the Contractor. Both the online and paper-based items shall follow the CDE style guide and reflect the principles of Universal Design. (See A.4.3.d.)

The Contractor shall work with CDE to create item specifications and style guides for all content areas and item types using existing CDE materials as

reference to current style and formatting expectations. These documents shall approach different components of the standards in different ways. The item specifications shall result in items tightly aligned with the Colorado Academic Standards (CAS), which include the entirety of the Common Core State Standards (CCSS). Working alongside CDE, the Contractor shall establish item specifications that include a variety of contexts and applications of the tested skills across each content area and item type. Furthermore, for each content area, grade level, and item type, the item specifications shall exhibit a range of cognitive levels and difficulties.

On an annual basis, the Contractor shall work with CDE to review and revise the item and art specifications and style guide for all assessments and content areas to verify that they contain any newly-introduced features or needed clarifications to existing specifications as requested by CDE. The Contractor shall be responsible for providing updated copies of item and art specifications and style guide to CDE for approval. All items, tasks, and passages shall be subjected to a separate quality control check to verify that all materials are Accessible Portable Item Profile (APIP) compliant.

The item specifications will include Colorado's preference to include items that reflect Colorado. The Colorado context must not interfere with the construct being measured or result in preference for certain populations resulting in bias.

A.4.3.d. Universal Design. The Contractor shall create items that will permit students with disabilities and English language learners (ELLs) to fully participate in the assessments and receive valid scores, while minimizing the need for accommodations.

The Contractor shall, at a minimum, incorporate the following steps:

- Train item writers in universal design considerations and student characteristics;
- Avoid construct irrelevant content that may unfairly advantage or disadvantage any student subgroup;
- Consider access issues at the time of item writing (example: items with needed visuals/graphics/animation, determine how students with visual disabilities will access the items);
- Consider the impact of different accommodations on items;
- Minimize construct irrelevant language load:
    - Use everyday words to convey meaning when vocabulary is not part of the tested construct;
    - Establish text that is straight forward and concise;
    - Reduce excessive text length and irrelevant material;
    - Avoid complex sentence structure;
    - Use clear, unambiguous words; and
    - Consider major sign languages and sign systems for students who will need signing as an accommodation;
- Minimize the use of italic typeface;
- Use highly distinguishable symbols on graphics;
- Provide art and illustrations that have clearly distinguishable features;
- Avoid using text on shaded backgrounds;
- Examine items for evidence of disability bias and avoid such items;
- Include disability and language acquisition experts in item reviews;

- Review items in the format they will appear on the operational assessment;
- Field test items in accommodated formats;
- Utilize universally designed "help" features and directions; Incorporate accommodations into the computer-based administration, including accommodations used by students with sensory disabilities (ex. magnifiers, enlarged print, oral descriptions of visuals, and oral and signed presentations as appropriate);
- Use page-layout designs that are easy to read and follow;
- For items that will not transfer to a paper-based accommodated version, write paper-based items that maximize comparability with the technology-enhanced items (this can be accomplished by using the technology-enhanced item as the referent for developing the paper-based version where possible); and
- Review item statistics from field testing for students with disabilities and English language learners prior to selection of operational items.

A.4.3.e. Number of Items to be Developed.

For each year, grade, content area and item type in the summative assessments, the Contractor will identify the expected number of items that will be developed to be taken to item review, the number expected to be accepted, the number expected to be included across the test forms during field testing and the number expected to be accepted at data review. Contractor is required to provide enough items that pass data review to meet refresh and release requirements for each item type.

Based upon the current test designs and mutually agreed upon overage assumptions, the following tables provide the annual development plans by grade and subject in order to meet the current development needs.

The Contractor will review the item bank annually to determine if any adjustments are needed to future item development plans.

Science Item Development – Total Items Developed

Summative - Science	2012/2013	2013/2014	2014/2015	2015/2016	2016/2017
Grade 5	172	103	72	42	34
Grade 8	172	103	72	42	34
High School	172	103	72	42	34
Total	516	309	216	126	102

Social Studies Item Development – Total Items Developed

Summative – Social Studies	2012/2013	2013/2014	2014/2015	2015/2016	2016/2017
Grade 4	120	80	71	39	39
Grade 7	120	80	71	39	39
High School*	120	80	71	39	39
Total	360	240	213	117	117

*The introduction of the extended constructed item type may slightly impact the number of Social Studies items to be developed. Any revised totals will be mutually agreed upon with CDE and the Contractor.

A.4.4. Electronic Item Development System and Item Bank.

A.4.4.a. Item Development System. Item development for the summative assessments shall be carried out using the Contractor's secure encrypted electronic item development system. The Contractor shall complete item development and internal review tasks within the Contractor's item banking system, IBIS. Also, CDE shall have direct access into the item bank, working via a secure web-based interface. Access through this interface shall be secured through user authentication and controlled by Contractor-managed credentials. All data transmissions shall be secured by 128-bit SSL encryption to help maintain the security of Colorado data moving across the Internet. All designees working on Colorado item development tasks shall be granted access to portions of the system consistent with their roles in the item development process. CDE staff and external review committees shall be able to comment on items during steps in the workflow process designed specifically for Colorado. The Contractor shall establish access policies with CDE and manage granting of access for everyone who uses the item banking system.

A.4.4.b. Item Bank. Assessment items shall be stored and retrieved from the Contractor's secure proprietary item bank, IBIS.

During the transition period, the Contractor shall populate the item banking system with the Colorado Academic Standards.

IBIS shall carry answer keys for Selected Response items, and scoring rubrics, all potential scorable keys, and sample responses for short and extended constructed response items, as well as Technology-Enhanced items, if appropriate. Specified item information associated with each item—such as grade, content area, grade level expectation, standard (evidence outcome and nature of science as appropriate), next generation science standard tagging when available, difficulty, and DOK level—shall be included in the item bank. The Contractor's item bank shall also indicate the APIP designations. IBIS also includes all item text and graphics, including item stem, distractors, and links to artwork and item-format data such as response type (selected response and constructed response). Item statuses shall also be carried in IBIS (e.g., not yet reviewed, content and sensitivity/bias reviewed, field tested, data reviewed, and operational use history).

Data Elements. Examples of data elements included:

- Test form data, such as form designation, position on form, administration date, field test/operational test designation, and anchor/linking designation
- Classical statistics for Selected Response items, such as n counts, *p*-value, biserial, point-biserial, biserial and/or point-biserial by distractor, distribution of responses by distractor, omit, not reached, and double grid for Selected Response items
- Classical statistics for Constructed Response items, such as mean, standard deviation, and score distributions

- IRT statistics, such as difficulty, discrimination, guessing, and model fit
- DIF statistics, such as focal and reference counts, DIF values, and flags for each focal group

The Contractor shall load these elements into IBIS, shall perform quality checks through summary statistics reporting and manual inspection of sample records, and shall deliver them to CDE according to the schedule for each assessment. The Contractor shall follow CDE's procedures for obtaining approval for operational use of each item. Individual items shall have a unique identifier assigned.

The Contractor shall set up IBIS for the Colorado summative assessments, maintaining all aspects of the bank, and updating the item bank on an ongoing basis.

The QTI standard shall be the subset where APIP standards shall reside, when and if CDE determines the need to support this standard for accessibility.

A.4.5. Development Process and Cycle.

A.4.5.a. Performance Event Stimuli Selection and Storyboard Creation

The Contractor's content and editorial experts shall thoroughly review all passages and stimuli previously published and commissioned, before they are submitted to CDE for approval. The Contractor shall work with CDE to provide an item bank that is balanced and adheres to CDE requirements.

The Contractor shall evaluate passages and stimuli against the following criteria:

- Complexity. Passage and stimuli selection shall focus on increased text complexity keeping in mind the value CDE places on the use of authentic, classic, and historically significant material.
- Overall Quality. Passages and stimuli for all content areas must reflect the quality and complexity of the content studied in Colorado classrooms and dictated by the Colorado Academic Standards. Passages and stimuli must contain enough complexity, density, and interest to generate challenging items in associated content areas.
- Appropriateness of Content. The content of all passages and stimuli shall not, in any way, be objectionable or unfairly accessible to any group of students. Many topics are appropriate for classroom discussions — where the teacher can guide and moderate discussion — but are not appropriate for standardized tests. The Contractor shall avoid content or wording that could be construed as offensive to or biased against members of specific ethnic, gender, or racial groups, or students with physical, hearing, or visual challenges. The Contractor shall use checklists incorporating the best practices and shall work with CDE staff to refine guidelines for appropriate context content.
- Diversity. The Contractor shall work with CDE to confirm that previously published and commissioned passages and stimuli for all content areas reflect an awareness of and responsiveness to the diverse backgrounds, cultural traditions, and viewpoints found in Colorado.
- Variety. Under CDE direction, the Contractor shall work to make certain that reading passages and stimuli for all content areas represent a variety of

subjects, genres, authors, sources, and publication dates so that they reflect, insofar as possible, the kinds of reading citizens encounter in their daily lives in Colorado (e.g., government and historical documents, maps, travel guides, etc.).

The Contractor shall perform a thorough content and editorial review process of all passages and stimuli, whether previously published or commissioned. Ultimately, CDE shall have the final authority to accept or dismiss any edit or concern regarding any of the passages and stimuli selected for any of the Colorado summative assessments. After selecting the commissioned, previously published, or public domain passages and stimuli, the Contractor's content experts, editorial and research teams, and fairness reviewers shall review them thoroughly, with the following specialization:

- The Contractor's content experts shall review the work for grade-level appropriateness and the potential to support quality items targeted to the Colorado Academic Standards.
- The Contractor's editorial team shall review the contexts for grammatical accuracy, and the Contractor's research team shall review the commissioned submissions to confirm they are factual.
- The Contractor's fairness reviewers will verify that there are no bias or sensitivity issues in the passages or stimuli as previously described.

After the Contractor has thoroughly reviewed the passages and stimuli, the Contractor shall submit them to CDE for approval. Then, the approved materials shall be put before the Performance Event Stimuli and Storyboard Review Committee for their review and consensus opinion of the quality of the work. CDE will review the committees' input and make the final determination of acceptance.

The Contractor shall secure appropriate copyright permissions for the previously published contexts including passages, graphics, art or other stimuli that CDE accepts for item development. The Contractor shall secure permissions for these materials for use in online and paper-based assessments as well as for public release on the Internet. Copyright permission shall include the production of the various printed test forms that could be required: pilot, field test, and operational. In the event the Contractor cannot obtain permissions for unsecure Internet presentation, the Contractor shall work with CDE to develop alternative presentations. The Contractor shall update the item bank to include the terms of the permission, including the expiration dates.

The Contractor shall generate storyboards to outline the stimulus, interactions, and response portion for each appropriate simulation and performance event. Storyboards can be generated in different formats in order to meet CDE needs, but shall have basic structures that remain constant. The Contractor shall develop each storyboard to include graphics that show both static features as well as functional or interactive parts. Functional specifications will describe the method of item interactions required by the student in order to respond to the question or to demonstrate skill acquisition. The storyboard shall be presented in a format consistent with how item stimuli are seen by the student and end with expected correct responses.

A.4.5.b. Performance Event Stimuli and Storyboard Review (Educator Meeting). The Contractor shall incorporate the relevant insights and observations from state

educators who participate in Performance Event Stimuli and Storyboard Review meetings starting in year two.

Committee members shall review stimuli and storyboards to confirm that they meet several requirements for the Colorado Summative Assessment, including but not limited to the following:

- Selecting a variety of complex, high-quality stimuli genres
- Construct appropriate stimuli as dictated by grade level
- Organization and focus
- Student interest level
- Concept appropriateness as dictated by grade level
- Absence of potential bias/sensitivity issues or topics
- Appropriate reading level as dictated by assigned grade level
- Strong, appropriate content that will yield strong items that meet the Colorado Academic Standards

For each meeting, the Contractor shall prepare and provide all required review materials in as close to final format as is possible, including art work, illustrations, photos, and graphics. In addition to stimuli and storyboards, the Contractor shall bring all needed ancillary materials in hard copy to promote successful committee meetings, including appropriate reference materials, as approved by CDE. The Contractor shall take the lead, as deemed appropriate, for the training at the beginning of each Performance Event Stimuli and Storyboard Review meeting. The Contractor shall share the training materials and agendas with CDE approximately two weeks prior to the Stimuli and Storyboard Review meeting. CDE may review and edit materials and approve the final format of all stimuli and storyboards. The Contractor shall organize the stimuli and storyboards for review. The Contractor shall also provide committee members with all required forms, including confidentiality/security agreements and directions for obtaining reimbursements.

The Contractor shall provide storyboards instead of fully functioning simulations during this phase of item development. Fully operational items will be reviewed during Content and Bias/Sensitivity Review. CDE shall have the opportunity to review and approve the items with full functionality before administration.

In coordination with CDE, the Contractor shall recruit participants to attend the Performance Event Stimuli and Storyboard Review meetings. For science and social studies, the Contractor shall verify that a minimum of three diverse educators per grade/content area are in attendance. CDE staff members shall make the final selections.

During the Performance Event Stimuli and Storyboard Review meeting, the Contractor shall provide instruction on completing security and travel forms, track and check in/out secure meeting materials, facilitate and actively solicit feedback from committee members, listen to participants, provide clarification or rationale as when requested, maintain a respectful attitude toward all participants and all comments made, and record committee input and recommended changes.

The Contractor facilitators shall record all committee input in an electronic PDF file, with a location to mark the committee's judgment as *accept as is*, *accept*

with edits, or *reject.* At the conclusion of each meeting, the Contractor shall discuss issues or discrepancies with CDE staff found in the notes or committee recommendations. The Contractor shall compile and share the results with CDE. CDE shall have final determination on status of these stimuli and storyboards in the item bank and all results. The Contractor shall implement all edits authorized by CDE where possible.

A.4.5.c. Item Development Workshops (Educator Meeting). Workshop members shall develop Selected Response, Short Constructed Response and Extended Constructed Response items. Starting in spring of 2013, the Contractor shall work with CDE to train selected educators to develop performance events and technology-enhanced items, including simulations. CDE requires that items to be field tested in the spring of 2013 be partially generated by Colorado educators. In time to meet the above requirement, it is expected that workshop members will have met in person to participate in item writer activities for a three-day workshop. Beginning in the spring of 2013 (and annually after that), members will participate in two, two-day workshops. The Contractor shall, with the guidance of CDE, recruit Colorado educators and conduct one set of Item Writing workshops annually. These meetings are to develop sufficient quality items for the initial stand-alone field tests and to begin building a pool of items for future embedded field test slots. The Contractor shall have specially trained content area assessment specialists serve as mentors on site and, if needed depending on the number of educators in attendance, shall have assessment specialists available online for the purpose of monitoring individuals' progress and providing individual and constructive feedback.

The Contractor shall use the general guidelines provided in the *ETS Guidelines for Item Writers* for writing items. The Contractor shall use the guidelines to evaluate each and every item, including match to standard, unambiguous language, plausible distractors, and grade level appropriateness, among others.

The Contractor shall recommend that item writers receive several documents that will help them understand the foundational elements of the Colorado assessment program. These documents may include the following:

- *ETS Guidelines for Item Writers*
- A general session PowerPoint presentation addressing the fundamentals of item writing common to all content areas
- Content-specific PowerPoint presentations addressing issues particular to those content areas
- The Colorado Academic Standards
- Templates for each item type
- Children Writer's Word Book
- Every Day Language
- Item Development Plans for every assessed grade in each content area
- A copy of the Colorado assessment program's test and item specifications
- Confidentiality/nondisclosure forms submitted to CDE for review and revision as needed
- Specific item guidelines for items that are automatically scored and Technology-Enhanced items starting in year two
- Information on how to write items in order to avoid problems of bias and sensitivity (*ETS Guidelines for Fairness Review*)
- A checklist for item writers drawn from the item writing guidelines documents

The Contractor shall provide the introductory and training materials to CDE for review and approval two weeks prior to the workshop. Generally, the Contractor shall include the following for the content validity and technical quality portion of Item Writer Training:

- An overview of the purpose and scope of the assessment
- An overview of the test characteristics
- An analysis of the program-specific test and item specifications
- An overview of students with disabilities and English learners principles in assessment
- An overview of cognitive complexity (DOK levels)
- An overview of Universal Design in Assessment (UDA)
- Criteria for evaluating Selected Response and Constructed Response test items and scoring rubrics
- Techniques for developing and evaluating writing prompts for social studies

At the conclusion of the first development meeting, the Contractor shall inventory the items that have been created. The Contractor shall give specific item writing assignments to each developer for the remaining items that are needed.

The Contractor shall create schedules for the developers to submit items for review and receive feedback. Developers will have the opportunity to revise assigned items prior to the second item development meeting. The Contractor shall maintain a secure delivery method for items and feedback between developers and the Contractor.

A.4.5.d Item Revision and Supplementation.

Once items are accepted from a developer, the Contractor shall further review and revise the items, as needed, to meet CDE's expectations. The Contractor's process for review includes three internal content reviews, an internal editorial review, and an internal bias and sensitivity review. Throughout this multi-step item review process, the Contractor's assessment specialists shall continuously evaluate the match of the items to the standards, the appropriateness of the items to the population being assessed, the importance of the information being assessed, the implications for instruction, review and edit each item for technical quality, as well as conformity with Colorado Test Item Specifications and the Colorado Style Guide. If an item is unrelated to the content standards, is developmentally inappropriate, measures trivial information, or provides inappropriate models for instruction, the Contractor shall revise or eliminate it.

The Contractor shall have three levels of internal reviews of items: assessment specialist review, content area specialist review, senior-level content staff review. The Contractor shall use the following guidelines for these reviews:

- Match of each item to the identified standard
- Match of each item to the principles of high- quality item development
- Accuracy of the content of the item
- Difficulty of the item
- Adherence to the principles of universal design
- Relevance of each item as the item relates to the purpose of the test

- Readability of the item
- Appropriateness of any artwork, graphs, figures, etc.

During the first year of development, Colorado educators shall develop approximately 25 percent of the items and the Contractor shall use trained outside item writers to develop the remaining 75 percent of the items. Should Colorado educators be unable to develop this percentage of usable items, the Contractor shall assume responsibility for remaining item development. The Contractor's item writers shall have demonstrated expertise in item writing in the contracted content areas and grade spans. The Contractor shall train these item writers on the specific Colorado Assessment Standards, Colorado item styles, and general item specifications. In subsequent years, the development responsibilities shall shift toward Colorado teachers developing approximately 90 percent of the items and outside item writers developing the remaining 10 percent of the items.

Ultimately, the Contractor is responsible for the development of the needed number of items for each content area and grade level so that post item review, field testing and data review, there are sufficient items to build each year's operational assessment.

A.4.5.e. Content and Bias/Sensitivity Review (Educator Meeting). In coordination with CDE, the Contractor shall take the lead in the recruitment of panelists, providing the necessary logistical support and information for the panelists as they confirm their arrangements for participation in either the content or the bias review meetings. Educators participating in item writing are not eligible to participate in these reviews for the same grade/content area. For each meeting, the Contractor shall prepare and provide all required review materials. These materials shall be in as close to final format as is possible, including passages, artwork and illustrations, photos, and graphics. The Contractor shall bring passages, items, and ancillary materials in hard copy to promote successful committee meetings, including appropriate reference materials, as approved by CDE. The Contractor shall take the lead, as deemed appropriate by CDE, for the training at the beginning of each committee meeting. Beginning with development for year two, the Contractor shall share all training materials and agendas with CDE at least two weeks prior to each meeting. CDE may review and edit materials and approve the final format of all training components. The Contractor shall provide committee members with all required forms, including confidentiality/security agreements and directions for obtaining reimbursements.

The Contractor shall train committee members to evaluate all item types, to know the purpose and scope of the Colorado summative assessments and the test design and item specifications, to review items for instructional sensitivity, to recognize bias and sensitivity issues, relevance in terms of the purpose of the test, Depth of Knowledge and alignment to the Colorado Academic Standards, difficulty range, clarity, correctness of the answer, and plausibility of the distractors. Committee members will also be trained to recognize bias and sensitivity issues. Training shall also include having committee members review samples of items and stimuli that might be considered biased. The Contractor shall work with CDE to incorporate Colorado-specific issues or topics into the guidelines before the training.

The Contractor shall record all committee material utilizing PDF markup, with a location to mark the committee's judgment of "Accept as is," "Accept with edits," or "Reject." At the conclusion of each meeting, the Contractor and CDE representatives shall discuss issues or discrepancies in notes or committee recommendations.

The Contractor shall compile and share results from the Content and Bias/Sensitivity Review meetings with CDE. The Contractor shall implement all edits suggested by each review committee or will delete the item(s) from the pool. CDE shall receive summary results from the review meetings, including the total number of items accepted as is, the number of items with revision, and the number of items rejected.

CDE will make the final decision on all revisions to be implemented for the assessments.

A.4.5.f. Field Testing (Initial and Embedded). The Contractor's team of assessment specialists shall assemble field test sets of items so that they comprise the appropriate distribution of standards, item types, topic coverage, expected item difficulty cognitive levels, and key distributions. The initial field test forms shall align to one session of the operational assessment. For embedded field testing, location of field test slots should vary from year to year. The Contractor shall select items primarily from approved new development, but may select from the item bank if it contains items that still require field testing or re-field testing. The Contractor shall present to CDE for approval the proposed field-test items in item card format. After approval by CDE, the Contractor shall embed field-test items into approved field-test item positions of the operational form in composed test booklet or online format.

A.4.5.g. Data Review (Educator Meeting). Once annual testing is complete, the Contractor shall facilitate a Data Review workshop to review all items with their statistical data. For each meeting, CDE shall identify committee members. Four to five attendees per grade level band from across the state shall be invited to attend the meetings. The Contractor shall work as needed with CDE staff to locate a representative sample of teachers from across the state. Each content/grade-level meeting shall be facilitated by an experienced content expert. The Contractor's facilitators shall work closely with the Contractor's psychometricians and CDE staff during these meetings.

The Contractor's assessment specialist and psychometricians shall work under the direction of CDE to co-facilitate these meetings, determine roles and responsibilities, and to define the criteria for acceptable or unacceptable item statistics. The Contractor shall export item level-data from field-test analyses on item cards and provide the item cards for the item data reviews for flagged items. These item cards along with other training materials shall be provided for CDE's review at least two weeks prior to the meeting.

The Contractor's psychometricians shall begin these meetings by conducting a training session on how to interpret the data and review items. The Contractor shall engage panel members in discussions regarding items with questionable statistics and record committee recommendations on whether or not to accept or reject each item for inclusion in the Colorado item bank. The Contractor shall use item cards that include the item itself, item difficulty statistics (mean item score), item score-test score correlation, percent of low, middle, and high

scorers and the overall group choosing each option, and Differential Item Functioning (DIF) results. Other information can be included as well, if desired by CDE.

The Contractor's facilitator shall record all committee input in master item books, with a location to mark the committee's judgment of "Accept as is," "Revise and re-field test," or "Reject." At the conclusion of each meeting, the Contractor and CDE shall discuss issues or discrepancies in notes or committee recommendations.

The Contractor shall compile and share the results from the Data Review meetings with CDE. CDE shall have the final determination on status of these items in the item bank. The Contractor's plan of action and timeline describe how and when each of the training and support tasks will be accomplished. See Section A.10.2 for additional information.

A.4.6. Form Development.

A.4.6.a. Regular Form. The Contractor's assessment specialists shall select a set of operational and anchor items in accordance with the test blueprints and test construction specifications. Items selected for use operationally and as anchors shall meet the blueprint with a variety of topics and contexts with specified psychometric targets. The Contractor shall follow these guidelines during form construction:

- Review of the constructs and content included within each content strand (or reporting category) to establish that items address the breadth of content within each strand
- Balance of gender, ethnicity, geographic regions, and relevant demographic factors
- Thorough review of individual items to establish data within items is up to date and relevant
- Adherence to established test specifications and blueprints
- Selection of items with various stimuli type throughout the test form to enhance the test-taker experience by providing variation in the appearance of item types presented
- Efficient and deliberate use of varied content representative of the knowledge and skills in the CAS
- Review of full form, including field test items, for instances of clueing and/or content overlap
- Year 1, a minimum of 20% of standalone items are technology-enhanced. For all subsequent years, a minimum of 25% of standalone items are technology-enhanced
- Replacement rates are met:
    - Year 1, the refresh rate is at least 35% and a minimum of one item for all item types (standalone (SR), standalone 2 point constructed response (CR), standalone 3 point CR, performance event, and simulation)
    - Year 2, the refresh rate is at least 30% and a minimum of one item for all item types (standalone (SR), standalone 2 point CR, standalone 3 point CR, performance event, and simulation)
    - For all other years, appropriate replacement rates will be mutually agreed upon prior to contract extension.

The Contractor's psychometricians and assessment specialists shall review each test form. The Contractor shall consider the following factors in test assembly:

- Select only items that are eligible for operational use (i.e., have appropriate field test item statistics that have been approved by CDE for use, have not been exposed and have not been retired).
- Confirm appropriate distribution of difficulty range across items.
- Confirm appropriate distribution of cognitive levels across items.
- Check for balanced key positions across all four options for multiple-choice items.
- Verify items have been tested operationally in three or fewer operational administrations to limit exposures for items.
- Where ever possible highly memorable items, unless an anchor item, were not used in the previous year
- Verify that the anchor set meets technical requirements:
  - Content match to full form
  - Proportional match to psychometric targets, including mutually agreed upon maximum test characteristic curve differences.
  - Item position same as prior use (maximum shift of 3 when necessary and CDE approval)
  - Taken from prior year's form unless a different approach receives CDE approval

The Contractor shall retire or deactivate operationally available items after their fourth operational administration. Pending specific item needs during forms construction, CDE may approve the operational usage of otherwise viable items that have had four operational usages.

The Contractor's lead psychometrician and assessment specialist shall complete the initial selection of the linking items and share them with CDE for input. The Contractor's psychometric staff shall conduct statistical reviews throughout the form building process, and shall provide input and final approval of a core form. The Contractor shall document changes or edits in a log throughout the iterative process of review and input with CDE specialists. CDE shall give final approval.

A.4.6.b. Breach Form. The Contractor shall use one embedded operational form of the first year's assessments as the breach form starting with the third administration. An online breach form shall be available for assessments that are online. Where possible, the same breach form shall be used for the life of the Contract, including any extensions.

A.4.6.c. Paper/Pencil Accommodated Forms. For each content area's online operational forms, the Contractor shall develop a paper-based form from the first version of the online assessment, which is the version that will be used to create large print, Braille, and oral scripts versions. Any computer-based items or simulations for science and social studies shall be replaced with comparable, accessible items. Beginning in the third operational year, the paper-based and accommodated versions of each online assessment will be reused for subsequent operational administrations for those students requiring the accommodated paper version. It will include embedded field test items from this version, but embedded CR field test (FT) items will not be scored and item scores will not be used in FT item analyses.

A.4.7. Accommodated Materials and Administration Procedures

A.4.7.a. Accommodated Procedures. Depending on the particular test, the possible accommodations may include, but are not limited to, the following:: Braille, Large print, Recorded audio, Separate room, Oral English script, Sign language interpreter for spoken directions only, Recorder of responses (scribe), Extended time, Tactile graphics, Extra breaks, Oral interpreter for spoken directions only, Handheld four-function calculator, Selectable background and foreground, colors

The Contractor's Alternate Test Format (ATF) group shall collaborate with assessment specialists and approved Braille vendors to produce embossed Braille materials.

A.4.7.b. Large Print. The Contractor shall apply customized layout solutions to every test to maximize accessibility related to the print specifications regarding the font size, paper stock, and binding. For the first two operational years, the Contractor shall create paper large print versions using the approved paper/pencil accommodated form as the basis. Beginning in the third operational year (and each year thereafter), the large print version from the second operational year will be reused.

A.4.7.c. Braille. The Contractor shall facilitate Braille reviews of final test forms with CDE and committees of teachers. The meeting facilitator shall guide the committee through an initial training session, an accessibility review of the items, and obtain majority consensus on revisions that are required for Braille. If required, the finalized item revisions will be provided to CDE for approval.

The Contractor shall create the regular print form for use with test-takers requiring paper-based accommodations. The form shall be assembled from a set of fully accessible items. The Contractor's alternate test format team member shall conduct an accessibility review of the paper-based test form prior to assembly, in consultation with the assessment specialist, to establish the adaptability of all items included on the form. Consequently, it will not be necessary to omit or replace any items that cannot be Brailled. Inaccessible items shall be flagged in the Contractor's item bank. For the first two operational years, the Contractor shall create paper large print versions using the approved paper/pencil accommodated form as the basis. Beginning in the third operational year (and each year thereafter), the Braille version from the second operational year will be reused.

The Contractor's recommendations for the development of test material for students who are visually impaired may consist of the following:

- Identifying items that should not be Brailled due to the inappropriateness of the content for a visually impaired student
- Suggestions for the scripting of art or graphics related to an item
- Suggestions for minor modifications to art or graphics for Braille reproduction

In the adaptation of materials for Braille, the Contractor shall not cue the key to an item, omit information that is needed to answer the question, or include extraneous information that is unnecessary for responding to the item. The Contractor shall review the adapted test content to establish accuracy and

validity. Following the assessment specialist's approval of the adapted test content, the Contractor shall submit the test to a CDE- approved Braille vendor for embossing.

A.4.7.d. Teacher Read Directions. The Contractor shall work with CDE to develop teacher-read directions in conjunction with building test forms and administration manuals. The Contractor shall work with CDE staff to develop a comprehensive set of instructions that cover all content areas. The main sections shall include the following:

- Pre-administration preparation, including schedules, examiner's responsibilities
- Materials needed
- Test security procedures and protocols to be applied during the test administration
- Process to include how to handle student questions and enquiries
- Directions regarding processes to follow for document distribution and completion during the test administration process
- Instructions specific to the administration of each section and content area
- Appendices with forms and documents required in the test administration process

The Contractor shall work with CDE staff to develop a comprehensive set of instructions that cover all online administrations. This publication shall include clear instructions for guiding students through online navigation including how to use tools, how to mark items for further review, and how to submit answers upon completing the test.

A.4.7.e. English Oral Scripts. The Contractor shall prepare English oral scripts for Science and Social Studies for both the paper-based accommodated forms created in operational year 1 and year 3 and annually for one of the computer-based forms. These scripts shall serve the following two purposes:

- As the script for voice talent during audio recordings for both the computer-based and paper-based form.
- For use by examination proctors who read a test form to a student, including a translated test form in a language other than Spanish created by districts for both the computer-based and paper-based forms.

A.4.7.f Spanish Oral Scripts. The Contractor shall prepare Spanish oral scripts for Science and Social Studies for both the paper-based accommodated forms created in operational year 1 and year 3 and annually for one of the computer-based forms. These scripts shall serve the following two purposes:

- As the script for voice talent during audio recordings for both the computer-based and paper-based forms.
- For use by examination proctors who read a test form to a student for the paper-based forms.

The Contractor shall manage the production of Spanish oral scripts in consultation with bilingual assessment specialists to establish content accuracy.

A.4.7.g. Certification for District Translators. While there is no chapter of the American Translation Association (ATA) within Colorado, some fully certified members

of that association may reside within the state. Additionally, the Colorado Translators Association (CTA), while not directly affiliated with the ATA, provides certifications and has a pool of qualified members. CDE and the Contractor shall inform districts of the CTA and how to contact CTA as part of the process.

Colorado Translators Association (CTA)
615 S 46th Street, Boulder CO 80305
(303) 499-9622 info@cta-web.org
www.cta-web.org

Other individuals may also be bi-lingual/bi-literate and able to meet the needs of Colorado students. The Contractor shall also assist CDE in defining the qualifications for translators who are neither ATA nor CTA certified. The Contractor shall publish those qualifications. In addition, translations shall be with a written statement from the translator that the translation is true, accurate, and correct "to the best of my knowledge and ability."

In order for local districts to obtain certifications that satisfy CDE requirements, the Contractor shall develop a certification form in collaboration with CDE and place that certification online for district download and use. The local districts shall be responsible for confirming that translators complete the forms and for maintaining the forms and any required evidence for each assessment year, for a time period determined by CDE.

In the event that the Contractor receives any inquiries or questions regarding such translations, the Contractor's program manager will notify CDE. He will indicate the source of the inquiry, the district referenced, and the nature of the inquiry (if such information is available). CDE will then be able to follow up with the district and determine any subsequent inquiry or actions.

A.4.7.h. Spanish Reading and Writing. CDE reserves the right to exercise the option of administering Spanish Reading and Writing assessments. Should Colorado choose to move forward with this option, specific details will be negotiated in the future.

A.4.8. Document Development

A.4.8.a. District and School Assessment Coordinators Manual. The Contractor shall provide coordinators manuals for the Colorado Student Assessments based on CDE specifications and parallel to existing TCAP manuals where appropriate. The Contractor shall work with CDE to design a District and School Assessment Coordinators manual regarding the logistics around statewide assessment.

The Contractor shall send one hard copy to each district's central office and one copy to each school. In addition, the Contractor will distribute copies of this manual at the test administration workshops held approximately one month prior to test administration. This manual will contain descriptions of testing procedures and directions for secure test administration and materials handling in accordance with state policy as well as directions on security, packaging, and shipping. The Contractor shall make these manuals available via hard copy and online PDFs that allow text searching.

For the field-test year, district and school assessment coordinators manuals will be available electronically only.

The development shall follow a two-phase process: content determination and content development.

In the content determination phase, the Contractor shall work with CDE to evaluate the following:

- Current manuals to help determine a design template and the information that should be presented in new manuals
- Clarity of the instructions provided
- Information relating to performance of described tasks

After defining the content scope, the Contractor shall proceed with content creation. The Contractor shall check the text against the actual task performed to clarify instructions and include relevant steps. The Contractor shall work with CDE to obtain information, text, reviews, and approvals as needed. To develop products such as manuals, the Contractor shall use the following process:

- Compose the document after receiving approval of the final manuscript.
- Provide an editorial review of the file and deliver a technically sound document to CDE for review.
- Cross-check to other related materials to confirm consistency.

A.4.8.b. Proctors Manuals. The Contractor shall produce Proctor's Manuals for each grade level of the assessment. The Contractor shall develop the Proctors Manuals with input from CDE and according to CDE specifications. These manuals will be available in traditional hard copy and online via PearsonAccess™ and the CDE website as PDFs. The Proctors Manuals shall include changes to the assessment from the previous year, annual timeline of activities, security procedures, specific assessment procedures, instructions for the online system, and other topics as necessary.

For the field-test year, Proctors Manuals will be available electronically only.

A.4.8.c. Certification Forms. The Contractor shall outline the steps it will take to develop DAC, School Assessment Coordinator (SAC) and Examiner certification forms indicating that ethical standards, security procedures, and standard assessment administration procedures were followed throughout the assessment process. Forms shall also include space to indicate deviations from any of those. The Contractor shall provide an efficient means to collect, document and store these certifications.

The Contractor shall include students in the security certification process for both paper-based administrations and online administrations. The Contractor's program team is prepared to work with CDE to explore how best to include students in this process while protecting the rights of the students and maintaining the integrity of the Colorado assessments. All final decisions related to student certification will be made by CDE.

A.4.8.d. Test Booklets and Scannable Answer Documents. The Contractor shall carefully design and produce separate test booklets and scannable answer documents. The Contractor shall involve CDE staff in reviewing and approving

the test booklets and scannable answer documents. At each step, CDE, ETS and The Contractor will review the test booklets and scannable answer documents to verify accuracy and ease of use.

The Contractor shall create first page proofs that the Contractor's content and editorial staff review and then submit to CDE for review and approval. CDE shall review the page proof and make any necessary edits or comments for the Contractor to apply. This review and proofing cycle will repeat until the document receives a "clean" designation and is approved by CDE. Next the Contractor shall produce the digital proof state to verify the match between the content and format of the digital proof and the CDE-approved version. The Contractor shall route copies internally for final proofreading and verification of processing specifications. The Contractor's proofreaders shall thoroughly review the proofs. After the digital proofs are approved by all parties, the Contractor shall create printing plates and print the document.

The Contractor's editors shall collect print samples and compare them with page proofs to verify quality control procedures and confirm that any requested revisions were made. At that point, we will print and prepare for distribution of the secure summative assessment test booklets.

A.4.8.e. Ancillary Materials. Manipulatives used to fully measure the Colorado Academic Standards will vary, depending on the concept being tested. Manipulatives provided by the Contractor could include, but are not to be limited to, rulers, protractors, paper geometric shapes, , and other grade-level, content-specific materials. For tactile representations, districts will be given a manipulative list for each computer-based administration which may include items found in the classroom or in rare cases requiring purchase.

A.4.8.f. Sample/Released Items, Including Worksheets. Selecting an item pool for public release that not only is representative of the assessments, but can guide classroom instruction, will be critical to this program's success. Each year starting in the first year of the Contract (2012-2013), the Contractor's content specialists shall recommend items of each item type in each content area and grade which will be as representative of the assessments' cognitive complexity and content coverage as possible. CDE staff shall review the recommendations and make final decisions. The Contractor shall collaborate with CDE to prepare answer key documents and scoring guides which will provide teachers with the correct answers, scoring rubrics, standards assessed, and item statistics. The items shall be presented in such a way that they will be easily downloadable for use in the classroom.

A.5. Assessment Administration

A.5.1. Work Plan.

The Contractor shall adhere to the mutually agreed upon detailed schedule that outlines the tasks and durations for each year of the Contract. The draft schedule is included in Exhibit B. In each year of the Contract, student, school, and district data shall be loaded into the PearsonAccess™ system. For each year of the Contract, test materials shall arrive two weeks before the assessment administration.

The Science and Social Studies assessments shall be administered operationally online in the first year.

A.5.2. Test Window. The test administration window shall be according to the following schedules for 2013 and 2014.

2013 Assessment Administration	Start Date	End date
Initial Science and Social Studies Field Test Administration (this will include Science and Social Studies at elementary and middle school. Any scope beyond that will be mutually determined, agreed upon and documented between the Contractor and CDE.)*	4/29/2013	5/17/2013
Additional stand alone field testing for all grades as needed to build first operational forms*	Fall 2013	Fall 2013

2014 Assessment	Start Date	End date
ELA and Mathematics Field Test (subject to inclusion of ELA and Mathematics to the contract)	3/31/2014 (tentative)	4/11/2014 (tentative)
Science and Social Studies Operational Administration (this will include Science and Social Studies at elementary and middle school. Any scope beyond that will be mutually determined, agreed upon and documented between the Contractor and CDE.)*	4/14/2014 (tentative)	5/2/2014 (tentative)

*The exact schedule, scope, and costs for the High School, Science grades 5 and 8, and Social Studies grades 4 and 7 testing administrations will be mutually agreed upon by CDE and the Contractor through a finalized scope change summary by March 31, 2013. Any resulting contract modification will be executed within 45 days.

The specific test windows for 2015, 2016, and 2017 shall be determined with input from CDE. Post administration activities, such as standard-setting, will take place after the first administration of each subject area assessment. The Contractor shall work with CDE to move the test administration date closer to the end of the school year based upon operating efficiencies gained in years after the initial start up.

A.5.3 Materials Ordering.

A.5.3.a. Pre-ID/Registration File and Labels.

Colorado shall have a single data source for uploading and managing student Pre-ID/Registration information. The Contractor shall maintain a single student data source for paper and online testing, so users can manage data for both testing modes in one place, using one online interface. The Contractor shall work with CDE to transfer the layout of the current student Pre-ID/Registration file so that the existing group and test assignment structure and established procedures are maintained as nearly as possible.

The Contractor shall provide quality control of the pre-coding of student answer documents and student data labels commensurate with a high stakes assessment program.

The Contractor's system shall collect student data based on the agreed upon requirements via a data file upload, or manual entry into the system. Authorized users shall be able to add, modify, and manage student demographic information that has been successfully uploaded to the Contractor's database. This includes demographic information associated with students who are

excused or exempt from testing. Colorado districts and schools will have managed access to their own data, which supports data accuracy and shortens response time.

For paper-pencil accommodated versions of the assessments, the Contractor shall provide student-identifying information (pre-ID) that is preprinted on labels that may be affixed to student answer documents, scanned electronically, and that can be read visually by an individual Pre-ID answer documents including all student demographic information when they are printed using CDE enrollment file, so hand-gridding is unnecessary. Program information shall be pre-printed; however, the information can be updated by hand-gridding at the test site to correct or update student information. The intent of pre-printing information directly onto the labels is to minimize administration preparation in the field. Consistent with that, labels must be printed and packaged in a way that facilitates ease in distribution (ex. by school, grade, teacher when available, last name, first name). The Contractor shall package pre-ID labels and deliver them to each designated site as part of the shipment containing test administration materials. Bar coding may be added by the Contractor to automate check-in and processing of answer documents.

A.5.3.b. Materials Ordering System. The Contractor shall provide a secure online electronic ordering system for DACs to use for ordering testing materials. The enrollment or pre-ID file shall be the main method for ordering test materials. The system shall include features that allow users to adjust orders for all testing and ancillary materials materials; and to input their accommodated forms and material orders, including specialized editions like Braille and large-print tests. The Contractor shall confirm district/school orders for materials using a web-based verification system. The Contractor shall ensure that each district's order size is reasonable when it is submitted based on enrollment and prior years' numbers of students assessed. Previous enrollment counts shall be preloaded in the online system so comparisons can be made. Previous values will display next to the participation count entry field so users can compare the previous counts with the current counts. The system will calculate variances based on state-specified parameters, the previous counts, reducing the likelihood that unnecessary materials will be shipped. The Contractor shall contact any districts requesting an unusual order before materials are shipped. Authorized users will be able to make material requests after the initial order has been placed.

The Contractor shall engage in the following tracking procedure steps to secure CDE's order:

- Before packaging, the Contractor shall print a unique barcode serial number on secure test booklets and on other materials that require security.
- An inline quality control system will be used to verify that barcodes are printed sequentially on materials. Materials shall be grouped and weighed prior to wrapping to verify they are correct.
- After quality control verification, materials shall be wrapped by package size and organized on pallets for final assembly.

A.5.3.c. Online Roster. The Contractor's online roster system shall pre-populate using the pre-ID/Registration file provided by CDE. It shall also be used for district/school capacity planning prior to online testing.

A.5.3.d. Additional Materials Ordering. Last minute shortages of assessment materials shall be handled quickly and efficiently by the Contractor as specified in procedures mutually agreed upon by the Contractor and CDE. The Contractor shall provide an online electronic ordering system for DACs to use to order extra testing materials. This system shall allow DACs to order additional testing materials after final enrollment numbers have been entered. The Contractor's online electronic ordering system shall provide DACs with verification that orders have been filled and provide details about when and how the shipments were made. The Contractor shall provide a list detailing the districts that submitted additional orders, what they ordered, and whether they had participated in the original materials ordering window(s). This system must provide verification that the orders have been filled and provide details about when and how the shipments were made.

A.5.4. Document Production. An initial materials list is provided in Exhibit D.

A.5.4.a. Proctors Manuals. After manuals have been developed by the Contractor and approved by CDE, the documents shall be released for printing to the Contractor's certified printers. Following a final review and release, the Contractor shall package the manuals for distribution. One hard copy shall be sent to each district's central office and one copy shall be sent to each school. In addition, the Contractor shall distribute copies of this manual at the test administration workshops held approximately one month prior to test administration.

Proctors Manuals will be available for PDF download only during the initial field-test year.

A.5.4.b. Test Booklets and Scannable Answer Documents.

CDE staff shall be involved in reviewing and approving the test booklets and scannable answer documents produced for the Colorado student assessments. The Contractor shall follow a proven procedure for preparing print-ready live test booklets, scannable answer documents, manuals, and other printed materials. At each step, both CDE and the Contractor shall review test booklets and answer documents to verify accuracy and ease of use.

A final digital proof will be released and declared "clean" only after all review criteria have been satisfied. The documents will then be promoted to print production.

A.5.4.c. Breach Forms. Beginning in spring 2016, one form from the spring 2014 administration shall be available in all subjects, at all grade levels in the event of a security breach. The Contractor shall make the form available in PDF format should CDE need to administer a breach form of the assessment. Where possible, it is the expectation that the same breach form will be used for the life of the Contract, including any extensions. When an assessment goes online, the Contractor shall make the breach form available online as well. The breach forms will be statistically equated to enable use of the scores on the forms interchangeably. The breach form will be pre-equated. Breach forms shall not actually to be printed until (and only if) such a form is needed.

A.5.4.d. Ancillaries. The Contractor's content development team shall develop the specifications for ancillary materials necessary for completing the test(s). Once

approved by CDE, the Contractor shall handle all procurement and distribution for required materials.

A.5.4.e. Accommodated Materials. The Contractor's content development team shall develop the specifications for accommodated materials production. Once approved by CDE, the Contractor shall handle all procurement and distribution for required materials. To streamline the assessment accommodations process, accommodation codes will be recorded on the Colorado student assessments answer sheets.

A.5.5. Secure Distribution, Collection, Storage and Destruction.

A.5.5.a. Packaging. The Contractor shall provide orderly, accurate, and timely packaging and distribution. The Contractor shall provide pallet maps to indicate where DACs may find the materials ordered. The Contractor shall provide security during pre-packaging and assembly and shall improve accuracy through a pick and pack process. Schedules shall be met with on-time shipping and a timesaving materials check-in process. Materials shall be separately packaged by district and school and sent to the DACs while maintaining accuracy of orders. The Contractor shall track all materials as they progress through the packaging system and through final shipment to districts. The Contractor shall use its software and barcode-scanning process controls to assist with quick and secure receipt of testing materials and accurate distribution to individual districts and schools in Colorado. The Contractor shall assume and maintain a 10% overage of all materials to support last minute requests or shortages from districts.

Materials inventories, including the accommodated materials, will be closely monitored during the materials ordering window. The Contractor will work with districts to ensure accurate enrollment counts were entered. Shortages of materials due to unexpected influxes of a population will be quickly addressed through reproduction with the approval of CDE. Additional reprints may be handled through a change control process.

A.5.5.b. Distribution and Collection. For pencil-paper versions of the assessments and for scorable and non-scorable testing materials, the Contractor shall be responsible for the distribution and collection of testing materials, including outgoing and incoming assessment materials, as well as hard copies of reports. CDE will provide shipping and contact information for each DAC. The Contractor shall follow CDE security specifications during pre-packaging and assembly. Before packaging, the Contractor shall print a unique barcode serial number on secure test booklets and on other materials that require security. An inline quality control system will be used to verify that barcodes are printed sequentially on materials. Colorado student assessments materials shall be packed carefully as they progress from station to station for sealing, bar-coding, and shrink-wrapping toward final shipment. The Contractor shall group and weigh materials prior to wrapping to verify that they are correct. After quality control verification, the Contractor shall wrap materials by package size and organize them on pallets for final assembly. The Contractor shall apply an adhesive security seal to Colorado student assessments test booklets, so students cannot look at questions before a test begins. For multiple subject books, seals will be manually applied to test book sections. The Contractor shall identify and track secure Colorado student assessment materials with barcode serial numbers.

Secure bonded freight carriers and/or courier services shall be used for distribution and collection. Delivery and collection activities must conform to a rigid date/time schedule set by CDE. The Contractor shall use a brightly colored label on the outside of each box. This label will include the wording "ATTENTION: District Assessment Coordinator" (or other district personnel as stipulated by CDE) to indicate that the enclosed materials should be brought to the immediate attention of the appropriate district personnel. The size of the label must be appropriately large. Because the materials will contain secure and individually identifiable materials, all materials must be shipped with signature required for delivery. Verification of receipt of 100% of the shipments is required. Delivery of shipments is required no later than fourteen days before the assessment begins.

The Contractor shall provide Colorado districts with a detailed packing list and pallet map that will assist DACs in locating specific testing materials. Information on the pallet map shall include the pallet number, school or district number supplied by CDE, box range (e.g. 1-20) for each district/school location, the number of boxes for each district/school location on the pallet, and the total number of boxes on each pallet. When shipping the district's test materials requires more than one box, the Contractor shall indicate the actual number of boxes that have been sent (e.g., Box 1 of 10, etc.). The Contractor shall provide carrier information so that DACs can track shipments. The Contractor shall use the email addresses provided by CDE to alert DACs with an email when an order has been shipped.

To help Colorado district representatives easily check shipments for accuracy when they arrive, the Contractor shall include the following easy-to-read shipping reports:

- Packing Lists and Pallet Detail Reports provide accurate information about the quantities of materials boxed and to what locations they were shipped.
- A Security Report lists each individual barcode number assigned to each site.

Colorado district representatives should complete the following steps after Colorado summative materials arrive:

1. Verify the shipment
2. Confirm the inclusion of all secure materials
3. Check that barcode ranges correspond to the Security Report
4. Complete the report, note any discrepancies, sign it, and return it to the Contractor along with the test materials.

In addition to collecting the testing materials produced by the Contractor, the Contractor will also be responsible for collecting materials created by the districts (ex. translated oral scripts) required to administer the assessments appropriately.

A.5.5.c. Materials Storage and Destruction. Colorado student assessments materials shall be stored as follows:

- Secure materials that do not contain student responses will be stored for six months (180 days) after reporting.

- Paper documents with student responses will be retained for one year (365 days) following scoring and reporting.
- Electronic images and files will be retained for the life of the Contract, including extensions of the Contract, and an additional 12 months after the Contract ends.
- For raw materials that cannot be reused in future administrations, the Contractor will stage them for destruction six months following delivery. Materials will be staged for destruction at the end of the stated time periods. CDE will sign a formal agreement before the Contractor destroys any materials.
- Electronic images of student responses used for scoring will be archived and retained in a vault-like electronic environment. To prevent the loss of data, vault storage will be mirrored at two locations. When requested, and as a cost option, electronic images will be delivered to Colorado in an agreed-upon format at the end of the Contract. For the Colorado student assessments. The Contractor will employ both physical security—restricted access—and monitoring of the Contractor's computer facilities—environmental control, power conditioning, backup, and monitoring.
- The Contractor's security measures shall also include fully redundant hardware and secure offsite storage of daily and weekly backup data. If examination materials or data are stored off site, they shall be stored at secure locations, including bank vaults. The Contractor shall have fireproof vaults on premises for storing computer data disks on a short-term basis.

Upon expiration of the aforementioned time periods, the Contractor must request CDE's permission to destroy the stored material before doing so.

A.5.5.d. Disaster Recovery. The Contractor's system shall archive assessment data, and all archived data will be retained for the life of the Contract plus 12 months, but no less than seven years.

The Contractor shall mitigate customer risks and recover normal operation of critical infrastructure in the event of a serious threat or disaster. The Contractor's duties shall include disaster recovery processes for hardware and software to store and/or deliver any contracted products for CDE over the life of the Contract. The Contractor's planning shall be aligned with British Standard (BS) 25999-1:2006, an internationally recognized standard governing business continuity management. The Contractor's plan for business continuity and risk mitigation shall include the following core components:

- Ordering and prioritization of key process restoration over a two-week interval in the event of a disaster or interruption
- Backup and recovery of critical data and resources, including IT infrastructure, facilities, and operational equipment
- Organization of defined incident management teams – which have completed Federal Emergency Management Agency (FEMA) Incident Command System training – to provide standardized, structured management of the response to any anomalous incident that affects the Contractor's business operations
- Defined pandemic response protocols that plan for the possibility of reduced staff availability, reduced access to facilities, and issues with the Contractor's suppliers of goods and services

- Recovery planning with the organization, actions, and procedures necessary to evaluate and recover vital technology applications at an alternate off-site data center
- Annual disaster recovery exercises for all assessment systems that are dependent on the Contractor's data center
- Periodic testing and review of incident management and business continuity plans and processes

The Contractor shall plan for and implement a formal test of the tape backup and restoration process. Any failures shall be documented and retested until there is a successful restoration of all services, components, and systems. Testing shall occur at least once a year. The Contractor shall be committed to the continued operation of a Data Security and Business Continuity Department responsible for ongoing development and maintenance of business continuity planning.

The Contractor shall retain data for no less than seven years. The Veritas NetBackup software with multiple IBM tape libraries and Data Domain Disk Backup systems will be used to replicate data in near- real time to the Contractor's offsite disaster recovery systems, and to maintain continuous data availability and minimal restoration required in the event of catastrophic failures. Backups of all course content shall be performed daily, weekly, and monthly via a periodically audited backup schedule. Test restores shall also be performed periodically to verify that backups are successfully occurring. On the tape rotation schedule, the tapes will remain in the library for up to one week, in the Contractor's corporate/pre-production data center fire proof safe for up to three months and are then archived with Iron Mountain for long term storage. Data retrieval time frames shall be based on the amount of data to be restored and the level of difficulty.

In case of an interruption of power, all production data centers shall have multiple Uninterruptible Power Supplies (UPSs), air conditioning units, and diesel generators. ViaWest shall maintain fuel contracts with multiple local vendors to verify that the facilities can run indefinitely on generator power. In addition, the ViaWest downtown Denver and Arapahoe data centers have connections to two separate power grids within the facility and can be switched from one to another in an extended emergency situation.

Concerning personnel management in a critical situation, the Contractor shall maintain multiple tiers of support with a minimum of two personnel assigned for every key role and succession plans for primary management roles. In addition to having the Contractor's personnel on site at the primary production data center, the Contractor shall also have direct access to senior ViaWest Network Operations Center personnel, senior ViaWest engineering staff and all levels of ViaWest senior management staff 24/7/365.

CDE shall have final approval of the disaster recovery solution.

A.5.5.e. Verification. The security barcodes that have been applied to outbound documents and assessment materials shall be used to quickly account for the return of materials following test administration. As districts return their materials, the Contractor will quickly begin the verification process and provide daily reports showing district returns and any discrepancies within returned materials to the program management team. The program manager will then

keep CDE informed on a district-by-district basis with daily updates. A report shall be provided to CDE within five working days of the final date for receipt of post-assessment materials by the Contractor. The report shall include verification that all secure materials have been accounted for. The Contractor shall notify districts of discrepancies and shall work with them to resolve the discrepancies. Should there be no resolution, the Contractor shall notify CDE and work with CDE to take the necessary steps with the district in question. A final security report reporting that all secure materials have been accounted for shall be provided to CDE within one week after materials have been resolved with the Districts.

A.5.6. Test Monitoring.

A.5.6.a. Fidelity to Test Administration and Security Procedures. The Contractor shall provide district and school personnel with procedures for monitoring the secure administration of the test. Workshops and training shall include reinforcement of all security measures and indoctrination on why those measures are of value. Security verification forms for all district and school personnel who will be directly involved in handling test materials and/or administering the tests will be included. Additionally, the Contractor shall work with CDE to develop a student questionnaire related to the test environment and procedures used during testing. The Contractor shall also include security verification forms for all district and school personnel who will be directly involved in handling test materials and/or administering the tests. Section A.9.14 provides details about the data forensics analyses that will be performed by the Contractor.

The Contractor shall develop monitor checklists with CDE's review and approval. The monitors will work closely with the Contractor's management team, noting testing processes and any irregularities, and shall provide results to develop reports that will be provided to CDE within the specified testing period. The Contractor shall assume all responsibility for costs for the monitors and preparation of the reports.

Audit reports for each school shall be developed and should include the audit scope (numbers of test sessions/administrators observed, etc.). Audit results may include, but are not limited to, positive practices, nonconformities, and any areas for concern. In the event that a monitor reports a concern that could be interpreted as a breach of security, the Contractor shall quickly notify CDE and provide the monitor's report. Monitors will not interrupt or interfere with the administration; they will simply notify us what they have observed that may be questionable. CDE shall determine conduct any follow-up investigation and determine any course of action.

In addition, the Contractor shall compile issues and questions brought to the attention of the Contractor by CDE, DACs, and others. This compilation should inform discussions regarding which procedures may need to be clarified or enhanced in future years.

The Contractor shall provide assistance and support to CDE in strengthening Colorado's overall security procedures. This may include confirming that state-of-the-art processes, policies, and materials are being employed for the new state assessments.

A.5.6.b. Reported Violations of Administration and Security Procedures. If a DAC contacts either the Contractor's program or customer service team to report potential administration or security violations, the Contractor shall quickly notify CDE and shall also inform the DAC to immediately report any incidents directly to CDE.

A.6. Web-Based Online Test Delivery System

A.6.1. Work Plan. The Contractor shall provide Colorado with online testing services via its TestNav online solution in accordance with the schedule provided in Exhibit B.

A.6.2. Transition to Online Testing Plan.

A.6.2.a. Online Assessment Implementation Plan. The Contractor shall assist the districts in facilitating a live test of the infrastructure, using a "dummy test" with mock content that approximates the true size of the final test content. The Contractor shall determine through an infrastructure trial that Districts and schools can employ the Training Site area of PearsonAccess™ to log in via mock student credentials. All aspects of the local infrastructure shall be at a full state of readiness prior to administering the first live online testing. The same test administrators (proctors) for the Infrastructure Trial shall participate in the live assessments.

A technology consultant from the Contractor shall work directly with CDE to guide the implementation of any transition strategies. The Contractor's Colorado-based technology consultant for this program shall guide CDE and Colorado districts and schools through the many aspects of the transition from paper to online testing. The consultant shall be responsible for planning the transition process with CDE and overseeing its implementation.

A.6.2.b. Evaluation of Readiness for Online Assessment. The Contractor shall assist in facilitating the annual evaluation of the capabilities of Colorado's district computers and networks to determine readiness for online assessment. The Contractor shall provide comprehensive and user-friendly system utilities for districts to test and verify technology, hardware, and software to determine that the computer delivery method can be implemented. The Contractor shall work to determine that districts in Colorado are able to quantify bandwidth and plan allocations during testing periods using the Contractor's tools. The Contractor's system tools shall provide technology professionals sufficient time to test and adjust their networks. These tools shall be available throughout the year. If the assessment identifies potential problem areas, district IT personnel shall consult with the Contractor's technical support staff. The Contractor shall be responsible for working with the multi-state assessment consortia to implement and deploy the readiness tool. The tool shall include the Contractor's System Check tool, which will provide technical support staff with information about the following important elements:

- **Configuration for TestNav.** Checks that the computer meets minimum software requirements to successfully deliver tests online.
- **Network User Capacity**. Checks connectivity to the Contractor's servers. If proctor caching is used, it also checks connectivity to the proctor caching server. If there are Internet connection problems or if the Contractor's site is down, this check flags the error. Users can add a proctor caching

workstation in the school or district to allow for a faster connection, or delete a proctor caching workstation that is not being used.

- **Testing Volume Calculator**. Allows users to adjust network speed, network usage, and the number of students testing concurrently to find optimal testing performance. If a proctor caching server is not selected, then network capacity is based on the connection speed from the workstation to the Contractor's site. If more than one proctor caching server is selected, the District has the ability to manually direct the system to use the one with the fastest download speed.

The Contractor will be responsible for developing and implementing a plan to evaluate the readiness of Colorado's online schools to administer the online assessments meeting CDE's and the Contractor's security and standardized administration procedures.

A.6.3. Online Testing System.

A.6.3.a. Web-Based Online Test Delivery System. The Contractor shall provide Colorado with online services via the Contractor's proprietary TestNav, a browser-based platform. To support online testing in Colorado's schools with otherwise low-bandwidth environments, the Contractor shall provide for proctor caching.

The test delivery system must function (and be maintained) on a current release of Linux, Windows, and Macintosh operating systems. The Contractor will work with CDE to identify compatibility and security issues of operating systems, devices and other technologies (such as terminal services and other forms of virtualization), as well as the impact to operating systems or devices that are no longer supported by the system manufacturers.

Accessibility Features for All Students. Separate from accommodations, which shall continue to be delivered on an individual basis subject to approval, accessibility features shall be available to all students as desired by CDE. Content-related tools, such as rulers, calculators, etc., shall be available in a format that is similar to what students experience during instruction for the assessment. Students shall be provided with opportunities to practice online prior to testing using the tools that will be available during operational administration.

A.6.3.b. Tools and Accommodations.

The Contractor's system will include, but not be limited to, the following tools:

- Navigation tools;
- Highlighter, onscreen writing tool, answer elimination, and notepad;
- Writing tools including cut, paste, copy, undo, redo, font format, spell check and paragraph format among other basic word processing functionalities;
- Calculator tools, including four function, scientific and graphing calculators; and
- Additional mathematics and science tools, including drawing tools, rulers, protractors, compasses, and formula sheets, periodic tables.

The Contractor shall deliver accommodations and accessibility solutions for online testing, aligning to interoperability standards, and minimizing cost by using the same production workflow for accommodated and un-accommodated test forms. The Contractor shall utilize the APIP to allow items to be moved between item banks with accessibility features intact. It shall also provide clients with features that extend beyond APIP to more fully serve English learners and students with disabilities.

The Contractor's test delivery interface shall include all information and resources required to make test items accessible to students with a variety of disabilities and language needs. Accommodations will be made available in a form of the test based on the Personal Needs and Preferences profile for each student and include, but are not limited to:

- Visual accommodation tools including magnification, enlarged print, reverse contrast, selection of foreground and background colors, color overlay, and alerts to test takers that alternate tactile representations are available.
- Audio accommodations including text to speech and recorded audio including text within a graphic or table with the ability to highlight portions to be read aloud.
- Language accommodations including Spanish translations, word to word glossaries, and sign language/sign system presentation.

The Contractor will be responsible for evaluating the functioning of third-party devices, both plug in and non-plug in that may employ external software, used in Colorado schools. The Contractor will work with DACs, educators of students with disabilities and CDE to determine these third party devices that may allow students with disabilities to access the test. Based upon this feedback from the field, Contractor will review the device specifications. Those devices that appear to meet Contractor technical and security requirements need to be tested to determine how they may function during the testing experience. Contractor will work with CDE to publish and update as needed a list of approved third party devices. Plug in devices could include alternate keyboard, alternate mouse, keyboard monitors, switch devices, and some alternate and augmentative communication devices. Non-plug in devices that could be used include, but are not limited to, alternate keyboard, alternate mouse, refreshable braille displays, braille note takers, keyboard monitors, switch devices, and alternative and augmentative communication devices. Following Contract execution, the Contractor will provide a list of the devices for which the system has demonstrated compatibility.

A.6.3.c. Online Tutorials.

The Contractor's TestNav system shall support an extensive set of eTools that can be configured at the item level. The Contractor shall make online tools and standalone tutorials available for practice throughout the year to familiarize students with them prior to testing. These tutorials shall be available a minimum of 4 weeks prior to the beginning of testing.

A.6.4. Application Testing. The Contractor's quality group shall provide independent verification and validation of the software systems. This group shall report through the Organizational Quality group, which is independent of the Information Technology

group. The validation techniques of this group consist of end-to-end testing and product validation.

The Contractor shall engage in end-to-end testing where test cases are executed through the test environment in the same manner that live data will flow through the system. The system shall be validated to confirm that system functions and integration points are performing as intended. When issues are found during end-to-end testing, the Contractor shall document them, fix them, and retest. For the system testing, the Contractor shall create data in the same manner as live data and develop test cases.

Production validation shall occur after the system has been approved by the Quality group. After the Contractor has migrated the software code and configurations to the production environment, live data is processed through the system. The Contractor shall validate a sampling of the first production runs to verify that production data are processing through the systems in the same manner as it was tested.

Each system component shall be made accessible to CDE staff in a non-production environment that comprehensively mimics the production environment such that CDE will be able to conduct its own application tests and be assured that the application test responses represent the exact behavior that will be expected of the application in the production environment. The Contractor shall construct a testing platform for Colorado to use for the purposes of User Acceptance Testing (UAT). In performing the UAT, the Contractor shall discuss issues with CDE prior to moving the system into production. CDE shall have at least five business days to conduct testing of system components and 10 business days to conduct system-wide tests. District installation shall not be necessary for the solution provided. The Contractor's demonstration of the system to CDE shall occur at least eight weeks prior to the start of online assessment administration.

Any mandatory corrections, those impacting the validity and reliability of the assessment or corrections required due to design outside of the specifications, identified by CDE shall be incorporated by the Contractor before the start of administration. Any preferential changes identified by CDE shall be incorporated by the Contractor if such change will not impact the schedule for release. If such changes will impact the schedule, the changes will be made prior to the start of the following administration. Final approved forms and items shall be available in the Contractor's test delivery system a minimum of two weeks prior to the opening of the test window.

A.6.5. Data Integration and Collection.

A.6.5.a. Data Integration. The Contractor shall support a standards-based integration with the Shared Learning Infrastructure (SLI) Data Store once the specifications are defined, ratified, and published. The Contractor shall work with CDE to define a final version of the required SLI integration prior to implementation. Data from the Contractor shall be exported in one or more of the data exchange formats defined by the SLI Bulk Data Ingestion and Validation layer. These formats include:

- Standardized XML (Ed-Fi Interchange Format)
- Comma Separated Values (CSV) Format
- Schools Interoperability Framework (SIF)

A.6.5.b. System Requirements. The Contractor's system shall allow authorizations to be variably assigned to allow authorized administrators to update enrollment information, schedule tests, assign test forms, request additional materials and

ancillary services, and view reports and data online. The system shall be firewall, content filter, and caching-server friendly, and tailored specifically for network infrastructures found in K–12 environments. To support online testing in schools with otherwise low-bandwidth environments, the Contractor shall offer proctor caching to reduce demand for bandwidth. Before a test administration, encrypted test content shall be downloaded to a school computer acting as a local test server.

The Contractor shall allow authorized Colorado users to request a copy of the registration file that reflects all changes made to student demographic information online so that the state's student information system can be kept in sync with the data stored by the Contractor. When changes to student data are made online in the Contractor's system, the data may no longer match the state or local student information system. Therefore, requesting a copy of the updated student data shall enable users to compare or update the data. This feature shall also enable Colorado users to download large numbers of students; make mass changes to demographic, group, or test assignment data; and upload the file again to automatically update the Contractor's online database. The Contractor's system shall allow student data to be updated before, during and after testing. The data include student information and information about a student's test, which can contain accommodation codes. Details of information that will be collected shall be agreed upon during the requirements-gathering process.

A.6.5.c. Data Collection Protection Features. TestNav shall be able to tolerate interruptions in Internet service without loss of student data. Designated response file save locations shall be specified by the customer. Two designations can be made—a primary response file location and an alternate response file location. If a student's workstation is unable to transmit responses to the testing server during a test, the TestNav Early Warning System (EWS) shall save the student's responses to an encrypted backup file so that the student may either continue testing or exit the system without losing data. This activity occurs in the background while the software continues to provide test questions to the student. When the network connection is reestablished, TestNav shall upload the student's saved responses to the testing server. Successfully uploaded encrypted response files shall be automatically erased.

As a further precautionary measure, when the Early Warning System detects a potential problem with the designated "save" location, instructions shall appear on-screen for the test monitor to create a valid "save" location. If a student exits TestNav (either inadvertently or intentionally) before completing a test, that student shall not be able to continue testing until an authorized user authorizes the student to resume the test. When the student re-enters the test, the student shall be returned to the first unanswered question.

A.6.5.d. Access to Data Collection System. The Contractor shall provide data collection services to Colorado via Contractor's proprietary PearsonAccess™, a solution that provides an essential suite of tools for managing and coordinating activities for Colorado's student assessments. PearsonAccess™ —and the Contractor's staff who supports it—shall provide Colorado with flexibility to exchange and maintain data in a secure manner and to maintain open communication throughout online and/or paper-based testing cycles.

Colorado shall have a secure single sign-on solution to perform assessment related tasks. The Contractor's web access management solution shall be roles-based; it shall allow or deny access based on definable user attributes. PearsonAccess™ shall be configured according to Colorado requirements and access privileges for individuals or groups of users at the state, district, and school levels shall be determined by Colorado.

The PearsonAccess™ security module shall provide administrative user authentication and authorization services. Colorado shall have control over certain administrative security features, such as the following:

- Who is allowed to access the system
- What level of the system (state, district, school) each user can access (available levels will be configured to match the naming convention used by Colorado)
- Which administrative functions (enrollments, student data management, order tracking, viewing reports, etc.) each user is permitted to access based on their role

Available roles and their associated permissions shall be configured according to Colorado requirements. Each authorized user of PearsonAccess™ shall be given a unique user name and password. No secure area within the system shall be able to be accessed without proper authorization. Additionally, each user shall be authorized to access only certain data records within the system (as described above with respect to user levels and roles). Initially, the Contractor shall assign a user name and password to selected state-level individuals as specified by CDE. When accessing the administrative system for the first time, the user must agree to a confidentiality statement (customized by Colorado) and change the randomly generated password. Once inside the system, initial users will be able to establish new administrative user accounts by creating user profiles.

A.6.6. System Reliability and Mitigation Experience.

A.6.6.a. Information Technology. On a case-by-case basis, the Contractor's representatives shall review Colorado policies and standards related to technology use and security. The Contractor reserves the right to negotiate on potential points of divergence and to determine with CDE a workable compromise as necessary. The Contractor's systems shall be monitored seven days per week, 24 hours per day. The Contractor's staff shall continually collect and analyze metrics that indicate capacity and performance from the perspective of the students, teachers, and administrators who use the system.

The Contractor's comprehensive system performance monitoring tools and procedures shall include an automated systemic monitoring (i.e., operating system, CPU use, memory use, network health, etc.) performed by data center host and the Contractor—24x7, an automated and continuous database-level monitoring by the Contractor with proprietary monitoring tools that provide early warnings on performance and capacity thresholds, an automated external monitoring (from geographically dispersed locations) performed 24x7 to measure performance and availability from a client perspective, and end-to-end diagnostic monitoring providing performance measurement of all application and database components.

To protect Colorado's data, the Contractor shall perform full server backups twice a week (Sunday/Wednesday) and incremental backups to tape daily. The Contractor shall store tapes in a secure, off-site location. The Contractor's database servers shall store transaction logs on remote storage every 15 minutes to allow for more granular restore capabilities. The Contractor shall restore data for up to one year. The Contractor shall use backups to recover files and data in the event of catastrophic machine failure. The Contractor shall also make full back-ups before any major release of the system so that the state of the system prior to the release can be reverted back to if necessary.

A.6.6.b. Cyber Security. The Contractor agrees to maintain network system and application security that, at minimum, conform to State of Colorado Security Policies and current cyber security standards set forth and maintained by the Center for Internet Security. The Contractor shall design and maintain its networks and applications in accordance with international standards, best practices, and company security policies based on the ISO 27001 standard. The Contractor shall work to maintain the confidentiality, integrity, and availability of the overall systems that will support CDE requirements.

A.7. Scanning and Scoring

A.7.1. Work Plan. The Contractor shall adhere to the mutually agreed upon detailed schedule that outlines the tasks and durations for each year of the Contract. The draft schedule is included in Exhibit B.

The Contractor shall provide accurate and reliable scoring for CDE and its stakeholders. The Contractor's approach combines established methodologies with innovative strategies to increase scoring efficiency while maintaining scoring quality.

The Contractor's scoring plan for non-machine scored items for the Colorado summative assessments shall include the following:

- Range finding in Denver, CO, or another mutually acceptable location in Colorado, to identify responses for the anchor, practice, and qualification sets
- Training for human scorers that uses training developed by the Contractor's experienced professional scoring content staff and reviewed and approved by CDE
- Quality monitoring and management of the scoring process, which includes the Contractor's ISO- certified scoring processes
- Use of a set of scoring tools and procedures to achieve consistent, reliable scoring
- Artificial intelligence (AI) and human scoring of computer-administered student responses, combined with human scoring for five percent second scoring
- The use of AI must provide for equity across student populations supported by research
- Scoring engine that is trained using responses scored by the Contractor's seasoned scoring staff
- Using the Contractor's distributed scoring system for AI item responses that require human intervention

Colorado Student Assessment Operational Performance Scoring Quantities and Specifications 2013-14						
	Grade	4	5	7	8	High School
Content	Student Volume	63,819	63,327	60,921	59,667	58,247
Science	(0-2 pt) Total Constructed Response (CR) Items*		4		4	4
	(0-2 pt) CR Machine Scored		2		2	2
	(0-2 pt) Human or Artificial Intelligence (AI) Scored**		2		2	2
	(0-3 pt) CR Total CR Items*		3		3	3
	(0-3 pt) CR Machine Scored		0		0	0
	(0-3 pt CR) Human or AI Scored**		3		3	3
	Technology Strands (5 strands with 2 CR's per strand, 10 total CRs)***		10		10	10
	Technology Strand CR Machine Scored		5		5	5
	Technology Strand CR Human or AI Scored		5		5	5
Social Studies	(0-3 pt) CR Total CR Items*	7		7		7
	(0-3 pt) CR Machine Scored	0		0		0
	(0-3 pt CR) Human or AI Scored**	7		7		7
	Performance Events (2 per student with an average of 3 CRs per Event, 6 total CRs)*	6		6		6
	Performance Event CR Machine Scored	2		2		2
	Performance Event CR Human or AI Scored**	4		4		4

*For paper accommodations all these items will be human scored
**Distribution between human and AI scored items will be determined based on the number of items the AI system has demonstrated ability to scoring reliably, including across student sub-populations.
***For paper accommodations, these items will be replaced with maximally comparable non-simulation based SRs and CRs.

The Contractor will propose procedures and specifications for determining if an item should be used operationally and whether it can be scored with AI or will require human scoring.

A.7.2. Constructed Response Scoring Materials.

A.7.2.a. Range Finding Meetings (Educator Meeting). The Contractor shall initiate a teleconference with CDE staff to discuss program requirements and to plan critical events, including range finding. The Contractor shall develop a complete range finding plan, documenting their assumptions, roles and responsibilities, schedule, the number of items to be reviewed, the configuration of range finding sets, committee participants and agendas, and logistics, and submit this to CDE for review and further input.

Once the range finding plan is complete, the Contractor will begin preparing for meetings with the state content team. The initial meeting will be for the stand-alone field test, thereafter the range finding meetings will be for the embedded field test items. The Contractor's scoring project manager and scoring specialists will prepare the scoring directors for participation in the range finding process, including reviewing security requirements and the comprehensive range finding plan. Prior to the range finding committee meetings, the Contractor's scoring directors will become thoroughly familiar with materials and guidelines, including scoring guides, previous training sets, field test materials, and any other supporting literature.

Contractor and ETS content staff will review randomized responses from the stand alone and embedded field test to identify qualified candidates to take to range finding. Responses will represent the full range of score points and will be in proposed sets for presentation to the range finding committee. Each student response will be assigned a unique number for range finding purposes, and a corresponding log will later be used to record important comments and decisions. Scoring directors will sort and pre-score documents. The scoring directors will arrange these responses into range finding sets and will photocopy the appropriate number of these sets for members of the range finding committee. The first range finding meeting will be for the one-time stand alone field test; thereafter the meetings will be for embedded field test items and will be held each year. These range finding meetings will occur prior to field test scoring. The purpose of these range finding meetings is to define the rubric score points for scoring the field test items and to determine whether the rubrics need revision prior to field test scoring. These range finding meetings will also be used to develop scorer training materials for field test scoring training. If the range finding committees determine that an item is not eliciting the expected range of responses, Contractor will bring that item to the attention of CDE to decide if it should be removed from the item pool.

The Contractor shall conduct two day range finding meetings annually, in Denver, CO, to identify student responses to be used for training purposes. For each grade, there shall be two educators participating for science and two educators participating for social studies for a total committee of 12. These participants shall review and score enough student responses per grade, per score point, to generate enough options to be used as anchor, training, and calibration responses for field test scoring, keeping in mind that these responses and their scores will be also be used for operational scoring and the training of the artificial intelligence scoring engine.

The Contractor's scoring management staff and scoring specialists as well as ETS content specialists will attend range finding to assist the panel during the meetings. As facilitators, Contractor, will guide, provide feedback, and offer

information regarding the types of issues scorers are likely to encounter. The Contractor will lead discussion between participants until agreement on the final score for each item response is satisfactory to the group. ETS will provide content knowledge in this process. The Contractor and ETS will provide a process that leads to fair, accurate, and reliable scoring of student responses.

The range finding committee shall review the following:

- The summative assessment rubrics, as well as appropriate documentation of standard evaluation criteria that facilitate a common understanding of the standards and intentions of CDE.
- Copies of student responses, determining and recording consensus scores and, where appropriate, making recommendations for the possible placement of papers within training sets, in order for the Contractor to effectively construct scorer training.
- After Year 1, the scoring procedures and rubrics, training papers from previous administrations, and previous scoring decisions, so they can gain a common understanding of standards and a consistency of scoring.

The Contractor shall be responsible for documenting decisions of the range finding committee and recommendations of CDE. The Contractor shall keep a formal log of papers discussed, recording scores assigned along with any recommendations for the placement of papers in training sets. This log will serve as a historical record for each training paper.

The Contractor's scoring directors shall note the comments of committee members on the scoring of particular papers, as these comments may be useful in the training of scorers and provide benchmark points for discussions in subsequent years that will help to maintain longitudinal consistency. The Contactor shall deliver the log to CDE for confirmation that the committee decisions and official scores were accurately recorded. The Contractor shall submit proposed anchor and practice responses and proposed training annotations to CDE for review and approval prior to training. The Contractor shall maintain data and content security throughout the preparation of the range finding materials and during the meetings themselves. The Contractor shall account for range finding materials at the conclusion of each session and archive or shred excess photocopies and notes from each session, as well as delete or archive unneeded electronic copies.

CDE shall provide input to the range finding plan and participate in the range finding.

A.7.2.b. Anchor Validation Meetings (Educator Meeting). Given that all items will be scored during field testing with the expectation that AI scoring may be used in operational years, anchor validation will not be included in this program except under circumstances where it is mutually agreed between the Contractor and CDE that a clarified rubric may result in more reliable scoring.

A.7.2.c. Scoring Decision Guide. The Contractor's ISO-certified Quality Management System contains a Scoring Decision work instruction and documentation form, which the Contractor shall tailor for use on the Colorado summative assessment. The Contractor shall maintain a log of scoring decisions that includes decisions on how to address unusual situations or questions that arise each year. CDE shall review and approve updates to the scoring decision guide, scoring rubrics,

and scoring rules before they are used in scoring operational assessments. The Contractor shall make the scoring decision guide developed and used for scoring released items available to classroom teachers each September.

A.7.3. Scanning of Assessment Documents and Scoring of Selected Responses.

A.7.3.a. Scanning of Student Responses. The Contractor shall use its scanning technology to scan and capture data on all Colorado summative assessment documents for both multiple-choice and constructed-response items from the paper-based test forms. The Contractor will propose procedures for assuring the accurate imaging and scanning of the document, as well as editing procedures to assure the accurate recording of the student responses.

A.7.3.b. Scoring of Selected Response Items. The Contractor's validation team shall prepare test plans used throughout the process. The Contractor shall verify multiple-choice scoring for both paper and online delivery using score keys. Test plan preparation shall be organized around detailed specifications for the following areas:

- Raw score validation (e.g., score key validation; objective/strand/domain scoring, field test non-score; double-grid combinations; possible correct combination, if applicable; out-of-range / negative test cases)
- Derived scoring (e.g., scaled score, performance level, and percentile score validation)
- Matching (e.g., validation of high-confidence criteria, low-confidence criteria, cross document, external or forced matching by customer; prior to and after data updates; extract file of matched and unmatched documents)
- Demographic update tests (e.g., verification of data extract against corresponding layout; valued values for updatable fields; invalid values for updatable / non-updatable fields; negative test for non-existing record or empty file)
- Aggregation (e.g., tests of summary report data and field-level calculations; inclusion and exclusion criteria; minimum and maximum values for reporting categories; population subset confirmation; effects of attemptedness on aggregation outcomes).

A.7.3.c. Imaging of Short Constructed Response, Extended Constructed Response and Performance Event Items.

The Contractor shall capture information in its image scanning system in such a way that all images of documents belonging to a student can be accessed later as a complete unit or record. In the Image Capture Environment (ICE), constructed responses will be clipped, labeled, and presented to scorers for scoring. Demographic data is included with the student's response data. While the student remains anonymous to the scorer, the labeling of the clip shall allow it to be tied back to a specific student and the score included in his/her record.

A.7.3.d. Resolution of Student, School and District Data during Scoring.

The Contractor shall perform a data editing process to verify that information in the database is complete during a first production run (test) of documents with live student data and after scanning. The Contractor shall examine data for omissions, gridding, and other inconsistencies likely to be an error and accounted for in the editing rules.

After each stage, the Contractor shall perform hand-checks of the output file against each answer document to verify the scanner is correctly capturing marks. A formal sign-off will be required, validating that program output matches expected results before any further scanning takes place. The Contractor's editing staff and computerized editing system shall scrutinize all student, school, and district data collected. For each batch of answer documents processed, the Contractor shall perform edits on the previously scanned information. The Contractor and CDE shall mutually agree on the types of edits that are made and documented in the project specifications.

The Contractor shall collaborate with CDE to resolve discrepancies among student, school, and district data. Colorado has a unique student identifier system in place that will be used for resolution of student data.

CDE shall have the option of using the Contractor's online portal, PearsonAccess™. The Contractor's online portal shall enable district personnel to make and verify student demographic record corrections in real time, and to receive alerts about questionable information. The portal shall also alert users to possible key entry or transcriptions errors when they occur. Should CDE elect to use the Contractor's solution, PearsonAccess™ shall be configured to incorporate a Colorado-supplied set of data requirements with input from the Educational Data Advisory Committee (EDAC), the Contractor, and data pipeline staff members. These data edit rules shall define specific conditions that exist within a student test record, and may include single-field edits (e.g., invalid date of birth) and simple cross-field edits. In the event that a student test record contains a condition that does not agree with the defined data edit rules, a data alert message shall be generated and displayed on the PearsonAccess™ screen. Users shall be able to resolve the alert conditions displayed online so the student information is correct prior to final reporting.

As paper testing volumes decrease, the comprehensive system will combine paper and online to provide a single resolution process. By enabling districts to clean up all their data in one location online, the overall process will be more efficient and Colorado can better monitor and manage completion status. As a district completes its record corrections, Colorado will be able to provide final sign-off through the "Authorization to Proceed" process, at which point the district's data will be sent to Colorado for reporting.

Should Colorado decide to use its own system for making student biographical data corrections rather than using PearsonAccess™, the Contractor shall support CDE during this process by providing student biographical data files prior to field review and by accepting corrected student biographical data files from CDE after field review.

A.7.4. Scoring Center Procedures and Scoring Processes.

A.7.4.a. Scoring Center. The Contractor shall score the operational items requiring human scoring of the summative assessment though distributed scoring, which is an effective, secure, Web-based scoring model that incorporates several innovative components, including the following:

- Online training and qualification will be comprehensive and item-specific.

- Scorers will be trained and qualified using comprehensive, self-paced online training modules which allow them to manage their training more efficiently.
- An extended-hours Scoring Support Center (SSC) staffed with the Contractor's scoring directors and scoring supervisors who will provide quality monitoring, feedback, and user support via email and telephone service will be available.
- The Contactor's scoring system will include a comprehensive set of scoring and monitoring tools.

To score Colorado summative assessments, there shall be no restrictions on scorer location. Restrictions based on employment in Colorado schools may be imposed by CDE. In order to access the Contractor's distributed scoring system, scorers must authenticate to the system through a secure internet portal. Additionally, as stated in section A.7.4.c, the Contractor shall take steps to protect the confidentiality of student responses.

For operational scoring, scorers shall be trained via online training. This training, as described in section A.7.4.d, shall include review of anchor sets, scoring practice sets, and qualifications sets prior to scoring live responses. Additionally, the Contractor's distributed scoring system shall provide built-in tools that allow remote monitoring of scoring.

CDE shall have appropriate access to the Contractor's scoring system to monitor the scoring process. The Contractor recommends item-level training and scoring to promote scoring quality. Scorers shall be trained by scoring on a particular item at a time. They shall become experts on that item, on the range of student performance on that item, and on applications of the scoring rubric. The Contractor's in-house instructional designers shall work side-by-side with scoring content experts to create illustrative training sets. The Contractor shall monitor scorers as described in section A.7.7.a.

A.7.4.b. Scoring Staff. Scorers must have at least a bachelor's degree. The Contractor shall work with CDE to further refine scoring staff qualifications before the Contractor's staff begins serving in their respective roles. In addition, the Contractor shall provide, in writing, the credentials and qualifications of the scorers, table leaders, and scoring supervisors, for CDE's approval. CDE shall approve the assignment of the scoring supervisors. All scoring staff shall pass an initial criminal background check paid by the Contractor. As indicated in the Q&A document, this background check will include a Social Security Trace, National Criminal Database search, and National Sex Offender search.

The Contractor shall prioritize staff assignments based on experience with assessments similar in size and scope to Colorado's and shall pay careful attention to the candidate's background and his or her fit with the requirements of the summative Assessment. The key scoring staff that shall support the scoring requirements of the Colorado summative assessment are included in the personnel list in Attachment 2.

A.7.4.c. Scoring Confidentiality and Security Procedures. The Contractor's scoring system shall provide secure transmission of data at login and during active sessions through the use of industry-standard Secure HTTP (HTTPS) and Secure Socket Layer (SSL) technology. The Contractor shall also follow

standard access, password, and user identification protocols when authenticating users to its digital scoring system. Scorers shall be trained on security protocols. All scoring staff shall be required to sign a Confidentiality Statement. The Contractor's confidentiality agreement shall indicate that the individual will not provide any assessment information or materials to other individuals or entities, including but not limited to use as test preparation materials. CDE shall have and maintain the right to modify the agreement as needed to protect student information. All student responses shall be distributed anonymously, with no way for a scorer to link a student's demographic information to a response.

A.7.4.d. Scorer Training. The Contractor's in-house instructional designers shall work side-by-side with scoring content experts to create effective training sets. The Contractor shall consult and collaborate with CDE staff members throughout the process of response selection and training design. The Contractor's scoring directors shall attend the range finding meetings, create the training materials, and oversee scoring. To build training sets, the Contractor's scoring directors shall carefully review detailed notes and records from the range finding committee meeting, using the responses designated by the committee and selecting additional suitable student response samples as needed to build training sets.

Once the anchor, practice, and qualification sets (qualification sets for operational items only) have been refined, they shall be submitted to CDE for review and approval. After approval, scoring directors shall compose annotations for the operational items for each response in the anchor and practice sets. These annotations shall use the language of the rubric and specific text from the student's response to demonstrate the connections between the rubric and the content of the response. The annotation shall explain the reasons for the response receiving a certain score point and shall demonstrate why it is a helpful training response.

The Contractor shall design the online training modules so that content must be viewed prior to moving to the next screen or module. Additionally, the Contractor shall build interactivity into the modules to target and reinforce key concepts and important scoring decisions.

To achieve quality scoring for the Colorado summative assessment, the Contractor's scorers shall be intensively trained. Prior to scoring responses, scorers shall be required to complete a multi-set training course, described in the following figure.

Module	Content
Scoring for the Contractor	Will include an introduction to the Contractor; train scorers on appropriate policies and confidentiality requirements; and educate scorers on the philosophy of scoring, and the difference between scoring responses and grading student work.
Contractor's Scoring System	Will provide scorers with training on how to submit scores and practice scoring in the Contractor's scoring system.
Scoring the Project	Often defined at the subject level for each project, this module will provide project-specific training, including an overview of the project, details on who will be supporting them during the training and scoring process, and potential reader bias they may encounter while scoring.
Scoring the Item	Item level training, this module will provide scorers with the specific requirements needed to accurately score the item they are assigned. Item-specific content includes level-setting the scorer on the age of and resources available to the respondent, the prompt, rubric and annotated anchor papers.
Practice Scoring	Will provide scorers with practical experience applying the scoring guidelines to sample student responses and includes feedback on their scoring.
Qualification	Will test scorers on the retention of the training. In order to qualify for operational scoring, scorers shall achieve accuracy rates on at least one of the qualifying sets consistent with the interrater agreement requirement for operational scoring as specified in A.7.7.a.
Contractor's Scoring System Part Two	Will provide scorers with training on additional functionality of the scoring system, including how to communicate with supervisory staff and use of self-monitoring tools.
Before You Score	Will present advanced training on project-specific handling of responses that don't appear to meet the criteria of the rubric.

A.7.5. Human Scoring. The Contractor shall identify the number of staff needed to meet reporting timelines in each Contract year. The Contractor's scorers must complete training and qualification prior to active scoring. The scoring system shall prevent scorers from advancing to scoring without successfully completely the training curriculum for each item they are to score. Training shall include responses from, and the appropriate way to approach scoring for, different subgroups. While training will only be done based on English responses, the Contractor will be responsible for also scoring Spanish responses and any other languages the Contractor indicates it has the ability to score. Other responses will be coded to indicate foreign language and will be scored as incorrect.

A.7.6. Artificial Intelligence Scoring. The Contractor shall provide both human and artificial intelligence scoring. Distribution between human and AI scored items will be determined

based on the number of items the AI system has demonstrated ability to scoring reliably. The Contractor's automated scoring technology, IEA, shall measure not only the grammatical correctness of a response, but also its content, completeness, organization and support with the appropriate use of evidence. The use of AI must provide for equity across student populations supported by research.

The Contractor shall use IEA to score online administered items when possible, with a five percent second human read for quality control as well as human scoring of outliers for all automatically scored items (outliers are responses that are unique and flagged by the system for human rating).

- Contractor performance scoring staff will score a sample of at least 1250 responses per prompt for short constructed response items, extended constructed response items and any constructed responses related to performance events.
- IEA will be trained to score like human scorers based on a training set of scored student responses.
- The responses used to train the engine will be 100 percent double-scored by human scorers and will receive final scores.
- Once trained, IEA's performance on each prompt will be compared against human scoring performance
- When IEA's performance is not comparable to human performance on a given prompt, that prompt will be scored operationally using all human scoring.
- When IEA's performance is comparable or better, it will be used to score all responses, with five percent human scoring. In addition, any responses that IEA cannot confidently score will be directed to a human for scoring.

Before scoring a student response, IEA will analyze the response to determine the confidence with which it can score it accurately. IEA will use a variety of checks to make this determination based on characteristics of the responses on which it was trained and experience with a variety of both good- and bad-faith responses. Responses that appear to be off-topic, not English, or highly unusual or creative will be directed to a trained human scorer through the Contractor's distributed scoring system.

A.7.7. Additional Scoring Considerations.

A.7.7.a. Reliability and Validity of Scoring Procedures. To maintain ISO 9001:2008 certification, the Contractor shall utilize a quality system to maintain consistency and uniformity throughout the scoring process and shall be routinely audited by an external auditor. The Contractor's processes shall be standardized, repeatable, documented, and followed. In addition, once responses have been scanned, they will be scored in a randomized order.

In collaboration with CDE, the Contractor's scoring project manager and content specialists shall establish project specific quality management measures. The processes shown in the following table include, but are not limited to, calibration, inter-rater reliability (IRR), validity, and frequency distribution.

Monitoring and Managing Scoring Quality	
Second Scoring	The Contractor's scoring staff shall closely monitor scorer performance and provide inter-rater reliability statistics. There shall be a 5% second scoring rate for operational scoring. Field testing scoring will employ a 100% second scoring rate. Means of determining the final score will be mutually determined by CDE and the Contractor.
Backreading	The Contractor's supervisory staff shall review the scores assigned to individual student responses to confirm that the scores were correctly assigned and to give customized feedback and remediation to scorers. There shall be a 5% backreading rate with higher rates for scorers identified as requiring remediation until they meet scoring expectations or are dismissed from the project. Means of determining the final score will be mutually determined by CDE and the Contractor.
Calibration	The Contractor shall provide continuing training and reinforce the scoring standards. Calibration proactively promotes accuracy by exploring project-specific issues, score boundaries, or types of responses that are particularly challenging to score consistently.
Validity	The Contractor shall verify that scorers are applying the same standards throughout the project and guard against scorer drift and ultimately group drift.
Validity as Review	Select validity responses that are annotated and flagged for review. These responses shall be sent automatically for review if the scorer does not assign the correct score, and aid in preventing scorer drift.
Scorer Exception Processing	The Contractor's project managers shall define intervals at which their scoring system will check scorer validity exact and adjacent agreement. If scoring is below pre-set standards, the system interrupts their scoring so they may work with a scoring supervisor, review anchor papers, or take other steps to improve scoring. This process prevents scorers from continuing to score if standards are not maintained.
Frequency Distribution	The number or percentage of scores assigned at each score point of a rubric and is another key metric tracked and managed during scoring. Anomalous trends are examined in conjunction with validity statistics to determine what actions to take.
Inter-rater Reliability	Allows scoring supervisors and scoring directors to monitor individual and group performance. Scoring experts can target individuals for increased backreading and feedback, and if necessary, retraining.
Retraining and Resetting Scores	Scoring directors assess a scorer's performance by reviewing statistics for inter-rater reliability, validity, backreading, and frequency distribution to diagnose areas of concern. If an underperforming scorer remains below the established standards for accuracy, the scorer shall be released from the project and his or her scores reset and redistributed.
Reporting and Data Analysis	The Contractor's image scoring system automatically captures and tracks score data. Reviewing up-to-date scorer performance statistics shall enable the Contractor to quickly identify particular scorers whose performance falls outside of group norms while also keeping close track of the group as a whole.

Monitoring and Managing Scoring Quality. Colorado summative assessments will be managed through a uniform set of scoring tools and procedures.

The Contractor shall meet the 95% exact plus adjacent agreement requirements for the 2-point, 3-point, 4-point, 5-point and 6-point items. The Contractor will strive to meet the exact agreement rates for the 2-point and 3-point (90%), and 4-point (78%) items if applicable. The Contractor will contact CDE when there is risk of not meeting the exact agreement rates as follows: 2-point at 80%, 3-pont at 70% and 4-point at 65%. An appropriate corrective action plan will mutually be determined and implemented.

A.7.7.b. Procedure for Unusual Responses. The Contractor shall train scorers to be aware of student responses indicating potential need for intervention. Alerts include child in danger of violence, severe depression, or abuse or responses that indicate a testing irregularity may have occurred. The Contractor shall follow its standard process for alerting responses that may require intervention by testing or school officials. Scorers shall receive initial instruction during training regarding alerts and will be trained to send such responses to a special alert queue in the scoring system, even if they are unsure whether intervention is required. Responses thought to indicate the student is a danger to him/herself or to others, is threatening property damage, or is in danger from some person or situation shall be sent to the queue.

The Contractor shall include a brief comment explaining the issue when a response is sent to the alert queue. The Contractor's lead scoring staff member shall access the alert queue, save an electronic copy of the response to a secure server, and completes a standard alert form, which includes a brief description of the issue and the unique identifying number associated with the response. The Contractor's scoring staff shall notify the program team and the program team shall use the tracking information to link the response to the student record. The Contractor's scoring staff shall not make any determination regarding level of risk but rather shall notify and forward any response in question to CDE within 24 hours of discovery by the scorer.

The Contractor's electronic scoring system shall allow other review queues to be set up where scorers send responses for further review, such as off topic papers or papers indicating a test administration issue such as teacher interference or prompting. In each case, scorers attach a text message to the response explaining the issue, and scoring directors access the response and the message to document the issue and contact CDE, as appropriate. The automated scoring system routes unusual responses for human scoring, which often include responses that would typically be alerted by human scorers.

A.7.7.c. Rescoring. The Contractor shall conduct reviews and rescores of open-response items upon CDE request. The Contractor's expert scorers shall review the original student responses in question and the original scores assigned. In each case, the original score assigned to the student response shall be reviewed and compared to the original anchor papers used in training. If the Contractor's expert reviewers determine that the original score assigned was incorrect, the Contractor's performance scoring staff shall provide a new score, which shall be delivered to CDE.

CDE may also allow districts to request rescoring of open ended responses. If the rescoring shows no change, then the local district will pay the reasonable cost of rescoring. If rescored student work results in a change in a student's score, the Contractor shall pay the cost. Before work begins, the district will

need to provide the Contractor with a purchase order for the work. CDE will not be responsible for the fees associated with rescoring of students' responses at district request.

If a district has questions about the accuracy of a selected response score once test reports have been delivered, The Contractor will handscore the answer document. The document will be rescored by hand, and the program team will contact the district with the results. In the unlikely event that an answer document has been scored incorrectly, the requesting party would not be charged for the rescore. The Contractor shall provide a plan for how to address the computer-based administered selected response items prior to the first operational administration.

The Contractor shall provide proposed procedures local districts will use to request rescoring prior to the first operational administration, as well as what districts will be charged to rescore student answers. The Contractor shall notify CDE about the number of requests for rescoring, as well as any student scores that have been changed.

A.8. Reporting of Data Files and Summative Assessment Results

A.8.1. Work Plan. The Contractor shall adhere to the mutually agreed upon detailed schedule that outlines the tasks and durations for each year of the Contract. The draft schedule is included in Exhibit B. The Contractor shall use proven tools for collecting Colorado summative assessment scoring and reporting specifications and establishing a baseline for data requirements and preferences. The process of defining detailed Colorado requirements will clarify information such as that in the following table. This list is not exhaustive.

Reporting Requirements	
Requirement Categories	**Description**
General Expectations	
Report Types	Descriptions, purposes, and narrative
Performance Content	Alignment to state objectives and grade level
Federal Requirements	Demographic summary reporting content
Timelines	Scheduling expectations, including scoring and reporting milestones
Business Rules	
Data groups	Attemptedness, suppression, and exclusion
Formatting	Rules for data fields within each reporting
Performance levels	Pass/fail designations and Identification of individual student strengths and weaknesses
Data Analyses	
Item Analyses	Summaries of performance data by test item across student reporting groups
Presentation	
Report Appearance	Graphic display standards and alternate media
Report Mockups	CDE review of mockups for all student-results
Production &	
Report Production	Printing, pagination, sorting, and collation
Report Delivery	Recipients, packaging, and shipping

The Contractor shall work with CDE to confirm its understanding of Colorado expectations. The Contractor shall reference this record of CDE requirements and preferences throughout the activities associated with delivering data analysis and results reporting.

A.8.2. Data. All raw student data shall be provided to CDE by the Contractor.

A.8.2.a. Data Files. The deadline for posting the initial individual student level file for the districts is no later than the first Friday in June, after the initial operational administration and standard setting schedule. For the first operational year for each content area, reporting shall be scheduled to follow the standard setting sessions and establishment of performance levels. The exact content, naming conventions, definitions of data elements, and file type shall be clearly documented and agreed upon by the Contractor and CDE at least three (3) months prior to test administration.

At the beginning of each new contract year, the Contractor's program requirements analyst shall gather specific data file requirements and work with CDE to establish a reference document to guide future development, quality testing, customer approvals, and delivery. The Contractor shall provide full state data files to CDE. The Contractor shall maintain the proper identification of each student and the accurate matching of each student to test results using the identification number for each student. The data file shall contain all information gathered on each student during the test administration and scoring period including but not limited to:

- School and district name and identification number assigned by CDE designating where the student was tested;
- Responses to individual items; and
- All raw and derived data.

Before generating final-results data files, the Contractor shall present a detailed data map for CDE review and institute intermediate CDE approval milestones throughout the reporting process.

The Contractor shall post the results file on its secure website and deliver it to CDE no later than June 30 of each year. However, for the first operational year for each content area, reporting shall be scheduled to follow the standard setting sessions and establishment of performance levels.

A.8.2.b. Data Documentation. The Contractor shall carefully document and execute CDE's requirements and preferences to determine the CDE design and content needs for reports and data files. The Contractor shall develop reports that provide information in a form most useful to recipients. The Contractor shall follow these steps:

Step One: Proposal Requirements. The Contractor's writers, designers, and developers have thoroughly examined Colorado reporting requirements. The Contractor's technology and program teams also have met internally to discuss and determine CDE requirements for student and summary reports.

Step Two: Development of Report Mockups. When the Contractor's teams reach consensus and form a clear picture of the assessment reports, the Contractor's designers shall begin to develop realistic mockups based on the recommendations. The Contractor shall provide full-size sample reports that reflect one standard set of report types.

Step Three: Customer and Internal Requirements. Shortly after signing a contract and before the beginning of every subsequent operational testing administration, the Contractor shall discuss CDE's precise reporting requirements for the Summative assessment. To save valuable time and effort, the Contractor shall assign a requirements analyst for the Summative assessment. With Colorado's existing deliverables in hand, the analyst will re-examine the Contractor's recommendations and pre-fill the customized documentation developed specifically for Colorado. Colorado requirements will direct how data of various types shall be handled, such as the following:

- Will incomplete responses to items be given partial credit, and if so, how will this "attemptedness" be represented in test item data and on student reports?
- Will results from test takers who have recently relocated be included in the summary for the new or previous district? How will these data be represented?
- To protect student privacy, what is the minimum number of students in any demographic reporting group? How should data be presented for groups falling beneath this threshold?

Step Four: Score and Report Planning Meetings. Early in the Contract cycle, the Contractor shall schedule initial scoring and reporting meetings. During this face-to-face consultation, the Contractor and CDE shall verify both the prefilled documentation and report mockups. The Contractor's requirements collecting job will not be completed until the Contractor has satisfied CDE by delineating the specified content, look, and direction for each final report.

Step Five: CDE Confirms Requirements. The Contractor's program team, report designers, and technology developers shall continue to work with CDE to baseline this documentation in anticipation of future scoring, data analysis, and reporting activities. The Contractor's customer-requirements analyst and program-team leaders shall capture the most significant details about Colorado's intended output long before gathering student input during testing.

Step Six: CDE Approval of Mockups. Colorado reports must be well constructed, graphically pleasing, easy to interpret, and accurate. The Contractor shall stay informed about recent reporting advancements, federal regulations, identified user preferences, and trends in effectively reporting student data nationwide, and inform Colorado when adjustments to the reports are warranted.

Step Seven: Reporting Requirements Completed. The Contractor's customer requirements documentation and mockups shall be used during data testing, quality assurance evaluations, and production to validate that the Contractor's deliverables meet CDE educational measurement objectives.

A.8.2.c. Data Ownership. CDE shall own and control the usage of raw and final data generated for the summative assessments. CDE shall own the raw and final data

generated through the Contract. The Contractor shall not be allowed to utilize data generated through the Colorado summative assessments for its own purposes. Any usage of the data generated through activities related to this Contract may not be used for purposes outside of this Contract without prior written approval from the data owners. CDE may choose to report the data in additional reporting layouts. Additionally, electronic images of the state level summary report by grade shall be delivered to CDE. The Contractor shall work with CDE to define all reporting layouts and formats, including delivery of electronic images of the state level summary report by grade.

A.8.2.d. Student Biographical Data Review (SBD) and Online Record Corrections. After testing, districts shall be provided with the opportunity to review the demographic data generated from the Summative assessments. The review process shall occur after all testing has been completed and scores have been submitted, but before all final assessment results are made available.

CDE shall have the option of using the Contractor's online portal, PearsonAccess™, to enable authorized staff to make corrections, verify student biographical data, and receive alerts about questionable information in real time. Should Colorado decide to use the Contractor's online portal, with input from the Educational Data Advisory Committee (EDAC), the Contractor, and data pipeline staff members. PearsonAccess™ shall be configured to incorporate a Colorado- supplied set of data edit rules that identify potential errors in online student- and test- specific data. These data edit rules shall define specific conditions that exist within a student test record, and may include single-field edits (e.g., invalid date of birth) and simple cross-field edits. In the event that a student test record contains a condition that does not agree with the defined data edit rules, a data alert message shall be generated and displayed on the PearsonAccess™ screen. Users shall be able to resolve the alert conditions displayed online so the student information is correct prior to final reporting.

The Contractor's comprehensive system shall combine paper and online to provide a single resolution process. By enabling districts to clean up all their data in one location online, the overall process can be more efficient and Colorado can better monitor and manage completion status. As a district completes its record corrections, CDE can provide final sign-off through the "Authorization to Proceed" process, at which point the district's data are submitted for reporting.

Should Colorado decide to use its own system for making student biographical data corrections rather than using PearsonAccess™, the Contractor shall support CDE during this process by providing student biographical data files prior to field review and by accepting corrected student biographical data files from CDE after field review.

A.8.3. Reporting.

A.8.3.a. Quality Control.

The Contractor shall make all data operations for the Colorado summative assessment subject to multiple checks for accuracy before they are released.

During scanning, scoring, and reporting for each test administration, the Contractor shall review and confirm that student results data are consistent with

Colorado requirements. The Contractor shall check that Colorado requirements have been met before presenting a data file or report to CDE for approval. This quality assurance step will be conducted by the Contractor's testers; they must be detail oriented, technically proficient, and follow documented best practices.

To confirm the quality of a data file, the Contractor's testers shall follow a process that typically includes, but is not limited to, the following:

1. Define all customer requirements and document all quality control procedures specific to the assessment program
2. Create a simulation (test deck) to verify that systems and algorithms are established according to client requirements
3. Check that all expected data fields and computed variables are in the file, populated, and represent valid and reasonable values
4. Should a value appear to be invalid, resolve, or escalate the discrepancy according to resolution rules (these commonly apply to cases of blank fields, missing scores, out- of-range scores, and so on.)
5. Confirm that the number of students scored per test form, the number of schools, and district identifiers are consistent with expectations
6. Check data fields to confirm that content categories and attributes match requirements documentation
7. Confirm that data analyses comply with business decision rules
8. Verify that data analyses results are reasonable, accurate, and complete
9. Check that minimum/maximum score values, standard errors of measurement, performance score ranges, and weighted means of district or state scores match requirements documentation
10. Verify that values for raw scores, scaled scores, and score distributions are within expected ranges
11. Check samples of reports at every organizational and aggregate level

The Contractor shall develop and implement quality control procedures for checking the accuracy of all test information, all student scores and identification, and all summary data. The standard for the error rate of data reports provided by the Contractor shall be zero (0.0). This excludes erroneous data provided by schools, districts, and state.

The Contractor shall plan and prepare quality assurance (QA) schedules that will allow work to flow in a timely, effective manner while maintaining high quality deliverables. CDE shall review and approve the QA schedules annually.

The Contractor shall create detail logs that trace the application of QA procedures to the state score reports after each administration. The Contractor is responsible for maintaining quality products and services in all aspects of the assessment program component from initial development of training materials to the production of electronic data files and score reports.

A.8.3.b. Formatting of Reports.

Assessment results for the summative assessments shall be reported in a "user friendly" format. The reporting system shall be designed to complement instruction and to facilitate the use of assessment results to improve student achievement. Reports shall reflect areas of strength as well as areas that need to be targeted for instruction.

The Contractor shall utilize feedback from students, parents, administrators, and teachers on report shells and content when designing and creating the reporting system. The design and layout of reports shall be initiated in a timely manner so that CDE has sufficient time to review the reports and to provide feedback to the Contractor.

The Contractor shall create reports that present categories of data in a consistent way, making it easier to read results across reports for those stakeholders who use more than one type of report.

The Contractor shall provide the necessary data for each user group as defined during the requirements documentation process with CDE. The Contractor shall provide the required reports listed in the following figure.

Colorado Student Assessment Reporting Deliverables Table		
Deliverable Name	**Medium**	**Copies**
State, District and School Summary Reports – by grade and content area - PDF report and data file	Electronic	
School Roster Report - PDF	Electronic	
Individual Student Reports – per school	Paper and Electronic	2 paper copies per student
School and District individual student-level data -	Electronic	

After Colorado's requirements have been fully defined and documented, the Contractor shall provide mockups for Colorado review.

A.8.3.c. Individual Student Reports. Score reports shall fulfill the federal reporting requirements of the Elementary and Secondary Education Act. Specifically, the reporting shall meet the expectations outlined in current Peer Review requirements.

The Contractor shall present overall student scores by subject and compare each individual student score against Colorado state totals. Individual Student Reports shall provide indicators of the student's performance level both in narrative form and graphically. This information shall offer a roadmap to student improvement that identifies both strengths and weaknesses in the student's performance. At a minimum, individual score reports shall summarize the student's performance in all content areas on which the student was assessed. This report shall include an overall transformed scale score, performance level, performance level descriptor, and sub scores for each content area tested. Two (2) paper copies (one for the school's student permanent folder and one for the parent) and an electronic version of individual student score reports shall be prepared that summarize the student's performance. The reports must include an indication of measurement error, such as error band graphics; relevant comparative information such as a bar chart displaying student scale score, school scale score mean, district scale score mean, and an explanatory narrative on all reports where appropriate.

The Contractor shall create actual mockups for the Colorado Student Assessments after Colorado requirements have been fully documented early in

the project cycle. The Contractor shall print reports on preprinted color paper to provide a full-color presentation at a fraction of the cost for offset color printing. The Contractor shall also develop report shells translated into Spanish with explanations for all assessments and, should Colorado exercise its right to move forward with the development of Reading and Writing assessments, the Contractor shall provide Spanish language reports for the Spanish Reading and Writing assessments for grades 3 and 4.

A.8.3.d. State/District/School Reports. The Contractor shall use PearsonAccess™ to generate reports at the student, school, district, and state levels. The same data reported on the individual student report shall be aggregated for state/district/school reports. Additionally, state/district/school reports must provide disaggregated data by student subgroup and trend data.

The Contractor shall provide summaries of results for accountability in both aggregated and disaggregated forms. **Aggregated results** summarize data across all students tested by school, district, county, and state. **Disaggregated results** summaries only include data for students meeting a specified criterion, such as belonging to an annual yearly progress (AYP) reporting group or having tested with a given accommodation. To protect student privacy (FERPA), the Contractor shall not report disaggregated results where a demographic reporting group contains so few students that an individual student could be identified. CDE and the Contractor shall work together to determine what hierarchy level that summary reports will be generated. Electronic reports must be generated that summarize the performance of the state/district/school on all components of the assessment taken and on any sub-domain or instructional objective sub-score. Exact content and format for each of the reports and files listed below will be further refined during the project. The Contractor will work with CDE to create the following reports and files:

- State PDF reports of summary and disaggregated data by grade and content area
- State file of data used to populate the district summary and disaggregated reports by grade and content area
- State file of data used to populate the school summary and disaggregated reports by grade and content area
- District PDF reports of summary and disaggregated data by grade and content area
- District file of data used to populate the district summary and disaggregated reports by grade and content area
- District PDF reports of school level summary and disaggregated data
- District file including PDFs of all individual student level reports
- District file of data to populate the school level summary and disaggregated
- School PDF reports of summary and disaggregated data by grade and
- School file of data used to populate the school summary and disaggregated reports by grade and content area
- School file including PDFs of all individual student level reports
- School file of all individual student level data

A.8.3.e. Reporting Approval. During scanning, scoring, and reporting for each test administration, the Contractor shall review and confirm that student results data is consistent with Colorado requirements. The Contractor shall check that

Colorado requirements have been met before presenting a data file or report to CDE for approval.

After CDE has approved the report formats and the type of information that will be included on the reports, the Contractor shall prepare accurate printed examples of the reports using mock data. The Contractor shall submit the report mockups to CDE for approval before proceeding with creation of the final score reports. Additionally, the first district reports processed will be used as a validation trial run for approval.

Following each test administration, the Contractor will print score reports for a small number of selected school districts and submit these reports to CDE for approval before any other reports are produced. The first school districts processed will be mutually agreed upon by the Contractor and CDE and will be considered a trial run of the reporting process. This report printing/approval process, bellwethers by CDE will be designed to be completed within a period of two to three days.

Prior to the distribution of reports, the Contractor shall provide computer readable student level data files to CDE. Prior to the first transfer, the Contractor and CDE shall mutually agree upon the exact format of the data files. However, the Contractor shall plan for the first transfer to be a direct electronic transfer to an agreed-upon secure server via FTP to be followed with an acceptable computer readable media (DVD preferred). The computer readable data file will include an indicator that specifies whether the student's biographical information was obtained from a pre-ID.

A.8.3.f. Reporting Dates. Colorado educators shall have the ability to quickly view assessments results for students tested online or on paper through PearsonAccess™. Additional capabilities shall include data-sorting, data filtering and viewing data in PDF format. Reports and data files shall be viewable via a published area within the portal and saved onto the user's system if desired. Users shall be able to access training manuals, interpretive guides, and other documents CDE posts there. CDE and Contractor shall work closely to arrive at an agreeable timeframe for report delivery, keeping in mind CDE's requirement for having individual student results no later than the first Friday in June, after the initial operational administration and standard setting year.

A.8.3.g. Report Dissemination. The Contractor shall maintain security of all individual test results. Individual test information shall be made available only to CDE, authorized school district personnel, and other entities identified and authorized by CDE. The Contractor shall provide all of the score reports and files to school districts as early as possible. The two copies of the Student Score Report must be provided in a paper copy so that one copy can be distributed to parents and the other retained in the student's permanent folder. Paper copies of individual student reports shipped to school districts shall be packaged to allow districts to easily separate the reports and to distribute them to individual schools. CDE will provide a list of names, emails, and mailing addresses for each district's assessment coordinator.

Other reports shall be provided in electronic format to districts and schools, such as via a secure web site or by a CD delivered to the district by a secure carrier.

Additionally, Colorado educators and districts shall have the ability to quickly view assessment results through PearsonAccess™. The PearsonAccess™ security module shall provide administrative user authentication and authorization services. CDE shall have control over certain administrative security features such as who is allowed to access the system, what level of the system (state, district, school) each user can access (available levels will be configured to match the naming convention used by Colorado), and which administrative functions (enrollments, student data management, order tracking, viewing reports, etc.) each user is permitted to access based on their role. Available roles and their associated permissions shall be configured according to CDE requirements. Each authorized user of PearsonAccess™ shall be given a unique user name and password, and no secure area within the system can be accessed without proper authorization. Additionally, each user shall be authorized to access only certain data records within the system (as described above with respect to user levels and roles). Initially, the Contractor shall assign a user name and password to selected state-level individuals as specified by CDE. When accessing the administrative system for the first time, the user must agree to a confidentiality statement (customized by CDE) and change the randomly generated password. Once inside the system, initial users will be able to establish new administrative user accounts by creating user profiles. Authorized administrative users can modify the permissions assigned to a user role at any time by simply selecting or deselecting check boxes. Changes become effective immediately.

A.8.3.h. Reporting Errors. The Contractor shall immediately notify CDE when an error in reporting has been discovered. The Contractor and CDE shall develop a plan for correcting the error. The Contractor shall also provide a revised timeline for correcting the issues and re-creating affected reports. Should a reporting issue occur, the vice president assigned to this Contract, the Program Manager shall notify CDE and shall draft a communication for notification of schools and districts.

A.8.3.i. Reprinting. CDE shall not be responsible for the fees associated with the reprinting of score reports if the reprinting is necessitated by the actions of the Contractor. CDE shall also not be responsible for fees associated with the reprinting of scores if the reprinting is requested by a district. If a district requests reprinting that is not necessitated by actions of the Contractor, the district shall be responsible for reprinting costs. The Contractor has determined costs for reprinting a districts score reports, including a set-up charge and a per-report fee to be charged to the district. The Contractor shall not proceed with any reprint processing until it receives a valid purchase order from the requesting district.

A.8.3.j. Assessment Interpretive Guide. Annually, the Contractor shall develop an Interpretive Guide to assist parents and teachers in interpreting assessment results from the Summative assessments. This publication shall contain images of the various reports and an explanation of each type of report. It shall also include information about tested content areas and a glossary of technical terms. The Contractor shall use its experience in developing interpretive materials to help stakeholders understand the components and terminology that accompany a state assessment program.

The Interpretive Guide shall be formatted in such a way that pertinent information can easily be copied at the school building for distribution to

teachers or parents. The format shall have information that is specifically targeted to parents. This information shall start and end with page breaks so that a parent does not get a partial page with information before or after the page break that is out of context. Parent information pages and the teacher information pages shall each "stand alone," The guide shall be designed with specific text graphics, and related materials for the desired audience. CDE will approve all materials prior to publishing. The Contractor shall print and deliver this document to Colorado schools based on a schedule defined by CDE.

To further assist parents, teachers, and other education system stakeholders, the Contractor shall seamlessly integrate the various elements of Colorado's interpretive materials and help CDE avoid the potential formatting, terminology, and analysis variations posed by having multiple contractors involved in such a project. The Contractor shall assist Colorado users of this information to understand how it can be applied in conjunction with score report data to inform teaching, learning, and assessment practices. In coordination with CDE staff, the Contractor shall promote a common understanding of CDE's interpretive material and will design specific text, graphics, and related materials for the particular audience. CDE shall approve all materials prior to publishing. The Contractor shall use all means available to communicate with CDE and transmit materials for review—email, overnight mail, teleconference, video conference, SFTP sites, and the Contractor's secure Work-in-Process pages on the Contractor's website.

The Contractor shall produce and deliver the "Understanding Colorado's Assessment Reports" document to CDE in ADA-compliant PDF files that are ready to be uploaded to the CDE website. The Contractor shall also print and deliver this document to Colorado schools based on a schedule defined by CDE. The Contractor understands CDE's desire to give every individual equal access to Colorado education-related materials, and the Contractor shall support CDE's commitment to provide full accessibility to these materials as defined in federal Section 508 standards. The Contractor's assessment and editorial staff shall verify that all alternate tag descriptions used in these Section 508-compliant materials are accurate, content-specific, and accompanied by well-defined directives. The Contractor shall work with CDE to verify that all files posted to the Colorado website meet Section 508 accessibility requirements.

The URL for the Interpretive Guide shall appear on all levels of reports.

A.8.4. Supplemental Reporting Modes.

Work on the supplemental role-based permissioned electronic reporting modes shall only commence upon CDE Director of Assessment's written direction to do so.

A.9. Psychometric, Research, and Technical Activities

A.9.1. Work Plan. The Contractor shall adhere to the mutually agreed upon detailed schedule that outlines the tasks and durations for each year of the Contract. The draft schedule is included in Exhibit B.

A.9.2. Piloting and Field Testing.

A.9.2.a. Piloting/Cognitive Labs for New Item Types - Sampling Design.

The Contractor shall conduct a small number of cognitive labs during the 2013 field test administrations of new computer-based item types for the Colorado assessments. The Contractor shall sample a total of approximately 60 students from across Colorado who will be selected based on a stratified sample of school and student characteristics and who will examine items from science and social studies.

The Contractor shall recruit students from three school districts across Colorado, including one urban, one suburban, and one rural district. Where possible, students from the target grade level from various racial groups, genders, socioeconomic statuses, and disabilities will have the opportunity to interact with new item-types to ensure that they are functioning appropriately for students in the target population. Within these districts, the Contractor shall sample from at least two schools as needed to recruit 3-4 students from elementary, middle and high school grade spans for both content areas:

Cognitive Labs					
District	# of Schools	Grade for Science	# of Students for Science	Grade for Social Studies	# of Students for Social Studies
District 1 – urban	2 schools	5	3-4	4	3-4
		8	3-4	7	3-4
		high school	3-4	high school	3-4
District 2 – suburban	2 schools	5	3-4	4	3-4
		8	3-4	7	3-4
		high school	3-4	high school	3-4
District 3 - rural	2 schools	5	3-4	4	3-4
		8	3-4	7	3-4
		high school	3-4	high school	3-4
TOTAL # of Students			30		30

Each item in the cognitive labs shall be administered to approximately 10 students. Contractor's staff shall work with CDE staff during the recruitment phase to select districts—and students within districts—across a broad range of relevant demographic characteristics that reflect the population of students to be assessed and those potentially most impacted. Among the characteristics that will be considered in selecting students within a given grade shall be ethnicity/race, gender, socioeconomic status, and disability type. For disability type, the Contractor shall include, as opportunity permits, students with visual disabilities, learning disabilities, ADD/ADHD, sensorimotor disabilities, or other disability types that occur in relatively larger numbers in the general student test-taking population. As noted above, general district and school characteristics will also be considered (i.e., geographical region and school size/type).

The Contractor shall conduct at least two rounds of cognitive labs that shall occur early enough in the development process to allow any recommendations arising from the labs to be incorporated into any desired revisions to test components prior to field testing and online introduction of the various content areas. The Contractor shall review and discuss results of these labs with CDE and others deemed appropriate to determine the sufficiency of these labs and the possible need for additional labs or related research as part of an ongoing annual research agenda.

The Contractor shall conduct an initial cognitive lab no later than spring 2013 for elementary and middle school students. This event will require participation of approximately 40 students sampled from across three districts within Colorado. The second cognitive lab event shall be no later than fall 2013 and shall again examine the interplay among item type, students, procedures, and technology, but this time for high school students. This event will require participation from approximately 20 students across three districts. The Contractor shall use the same criteria to select districts and students as were recommended for the initial cognitive lab. Students shall not need to participate for longer than about one hour in any session. For science, students shall receive 2 simulations and between three to five technology enhanced stand alone items. For social studies, students shall receive and/or one or two performance events and 3-5 technology enhanced stand alone items in a given session.

Usability and content staff from the Contractor shall serve as recorder/observers for each event. The Contractor shall focus primarily on one-on-one observations of students as they work their way through all assigned items. The Contractor shall conduct full screen capture of all student interaction with the computer, along with video and audio feedback also collected via computer. Additionally, each observer shall take notes during each student's session and, as needed, prompt students with appropriate questions (e.g., "What are you thinking about at this moment?" after long periods of silence or inactivity). In addition, observers shall ask questions from a post-session questionnaire and/or administer a short survey to each student. After initial data collection has been completed, the Contractor's staff shall complete coding sheets for each student capturing and summarizing important elements of student performance, incorporating and using other sources of information (e.g., screen captures, video, etc.) as appropriate. Data shall then be ready for further analysis. See additional details for the coding sheets and analyses in Section A.9.2.b below.

A.9.2.b. Psychometric Analysis of Piloting/Cognitive Labs for New Item Types.

As noted briefly in the preceding section, the cognitive labs shall focus on two general issues, each comprising several more specific concerns. These general focal points are:

1. Student content and cognitive processing concerns (student interactions with items)

- How do students work through a particular item?
- Do they follow a logical sequence of steps in solving a problem?
    - Do they follow the sequence the item developer anticipated they would follow?
    - Do they follow an alternate strategy to solve the item?
        - If so, does this alter the construct being assessed?

- Are students confused by any part of the item wording?
  - Do they reread parts of the item?
    - If so, which parts?
    - Why?
  - Do students misunderstand or fail to understand meanings of words?
  - Do students mispronounce words
- Do students read item and test directions?
  - Do they understand them?
  - Do they reread parts?
    - If so, which parts?
- Do students understand how they are to respond?
  - Content-specific issues
- Do students understand the content-specific parts of the item (e.g., math; science; etc.)?
  - Is relevant background knowledge activated?
  - Is background knowledge used appropriately?
  - Do students misunderstand or fail to understand content-relevant terms?

2. Student and item interactions with delivery system and related technology

- Does the format of the item provide opportunity for students to demonstrate their ability appropriately?
  - Or does the format confuse students?
- Are manipulatives easy to use and do they work properly?
- Are they equally accessible to students with various disabilities?
- Do other added features (e.g., zoom capability) that are intended to enhance students' awareness and understanding of the tasks they are being asked to undertake in a given item function appropriately?
- Do students understand how they are to respond to a technology-enhanced test item?
  - Are students familiar with the controls—or do they quickly become familiar with them?
- Do students use the available technology tools (e.g., calculator, Notes feature, etc.)?
  - Do they use the tools successfully?
- Do alarm and warning windows function appropriately when students engage in task irrelevant or task-inappropriate actions online?
  - Are computer responses appropriate and sufficient to resolve or redirect such actions?

The analysis of cognitive lab results shall be directed toward providing appropriate descriptive data back to the various department and staff responsible for major aspects of item and test development such as content, cognitive processing, item and test structure and format, and technology in a framework that helps them identify areas of concern and propose approaches to resolve any potential issues noted.

During the cognitive labs, The Contractor's observers shall work with checklists and data coding sheets to document their observations of students as they respond to test items. The Contractor shall employ additional approaches to data collection, potentially including video, audio, and screen captures. After the

cognitive lab sessions have been completed, observers shall work together to prepare cognitive lab summary sheets and to summarize item-level data across all relevant students. All student level data shall be appropriately tagged with a unique ID for each student to facilitate access and retrieval of all information relevant to a particular student's performance.

The Contractor's cognitive lab staff shall provide summary information for each item tested in the cognitive labs back to the appropriate content and technology specialists working on the Colorado assessment programs. They shall have access to individual student coding sheets, item summary sheets, item images or screen captures of actual online item functioning, and audio/video recordings of student performance. Item summary sheets shall provide an overview of item functionality, including the number of students who answered the item correctly, a description of areas within each item where problems or issues were observed (if any), as well as item components or features that were significantly successful/useful. Additionally, any indications of students' emotional reactions to each item shall also be summarized as such reactions are observed or inferred from student behavior. Finally, any recommendations for adjustment to an item, item type, set of instructions, manipulative, or other item or task feature shall be presented. A full set of such information shall be made available to both content and technology specialists as appropriate for particular content/item type groups.

Upon conclusion of each cognitive lab, The Contractor shall also collaborate to produce a written report documenting the results of the cognitive lab for CDE. The Contractor and CDE shall work collaboratively to discuss and evaluate the results of each lab, to prepare further reports and presentations for Colorado's TAC, for Peer Review, or for other concerned stakeholders and public accountability forums as deemed appropriate by CDE.

The above and the preceding section represent the Contractor's current thinking on the cognitive labs, not necessarily the final product. Dependent on CDE's approval these activities and timelines will be refined.

A.9.2.c. Field Test - Sampling Design.

Field testing will serve two purposes:

- It will allow the Contractor the opportunity to provide technology support on a smaller scale before the operational assessment the following year.
- It will provide the necessary statistical information in order to screen items and develop forms for the first operational assessment.

The Contractor will support approximately 30 districts from a technology perspective during field testing. This will require a two-tiered sampling plan. The first will be at the district level. The second will be at the school level. As participation in field testing is voluntary in the state of Colorado, multiple substitutions at both the district and school level will more than likely be required.

The Contractor shall construct the database that will be used to select the district and school samples by using demographic data from previous statewide assessments (to be provided by CDE) to construct the database with Colorado schools containing any of the grades 4, 5, 7, 8 and 11.

The database shall include information on the following potential stratification variables:

- Geographic area
- Urban, suburban and rural designation
- Gender representation
- Racial/ethnic composition
- Students with disability designation
- Mean student/school achievement
- District/school size
- Students with limited English proficient designation
- Socio-economic status (participation in free/reduced lunch program)

In addition, the Contractor shall include any other variables that CDE views as important in selecting the initial district and following school samples. The database shall be used to construct the frame, or the list of sampling units, that will be used to draw the sample.

The Contractor shall employ a variation of the stratified random sampling design called multiple stratification: primary strata and secondary strata or substrata. The Contractor shall use the following primary strata to sample districts and schools (and thus students within schools).

The Contractor shall use school size and school achievement as the secondary strata, though no school shall participate in more than two field tests at any grade level. The sample size will also vary across field tests. As specified by the artificial intelligence scoring needs, the sample size for each field test form will be 1250 students (select 1500 to obtain 1250 usable responses).

The Contractor shall draw one sample for each field test. During and after the process of sample selection, the Contractor shall prepare the following reports:

- During the process of sample selection, the Contractor shall prepare a conditional report containing sample statistics (in hard copy and in Excel) for each field test sample. The Contractor shall submit conditional reports for CDE conditional approval prior to the selection of all the field test samples.
- After all field test samples have been selected and conditionally approved by CDE, the Contractor shall prepare a final report (also in hard copy and in Excel). The final report shall contain sample statistics for each sample.
- The Contractor shall also submit a summative list of all units across all field test samples (in hard copy and in Excel) to verify that no unit has been selected to participate in more than two field tests at any one grade level. The list shall include the following information for each unit:
  - Name of the field test;
  - Unit code;
  - Name of the unit;
  - Grade level; and
  - Projected number of students participating in the field test.

The process of sample selection proposed by the Contractor shall consist of the following steps with steps 3-14 completed once at the district level and once at the school level:

1. The Contractor meets with CDE immediately after the contract is awarded to discuss details of this plan and to address any CDE concerns as needed.
2. The Contractor constructs a database for grades 4, 5, 7, 8 and 11.
3. The Contractor selects samples for all the field tests following the sample design.
4. During sample selection, the Contractor prepares conditional reports describing selected samples for each field test and submits reports to CDE.
5. CDE provides conditional approval of all field test samples.
6. The Contractor submits a report describing the selected samples
7. The Contractor submits a sorted summative list of all units across all field tests.
8. CDE provides approval of all field test samples to be invited to participate.
9. Units are invited to participate.
10. Participation is confirmed.
11. Substitutions are proposed by the Contractor, approved by CDE and contacted as needed.
12. The Contractor submits final report describing the selected and confirmed samples.
13. The Contractor submits a sorted final summative list of all units across all field tests.
14. CDE provides final approval of all field test samples.

A.9.2.d. Psychometric Analysis of Field Test to Support Operational Assessment. The Contractor shall conduct a study to determine which item response theory (IRT) model best fits Colorado's needs. Final design for this study shall come about through close collaboration between CDE, the Contractor's psychometric staff, and the TAC. Analyses shall include confirmatory analysis of the dimensionality of each subject area test to verify that the underlying construct can be treated as unidimensional. To be comprehensive, all item types and modes of administration shall be studied. The study shall be conducted using data from the initial standalone field test for science and social studies.

The Contractor shall apply the following combinations of dichotomous and polytomous IRT models to the data from science and social studies.

Configuration	Dichotomous Model	Polytomous Model
1	Rasch	Partial Credit Model
2	Three Parameter Logistic	Generalized Partial Credit Model
3	Three Parameter Logistic	Graded Response Model

Theta Estimation and "Number-Correct" Scoring

For logistic models, the Contractor shall evaluate two methods of deriving student scale scores—theta estimation and "number-correct" scoring.

Statistics for IRT Model Selection

The Contractor shall begin these analyses by assessing the unidimensionality of the data from the standalone field tests for Science and Social Studies after their administration in spring 2013.

To verify that the tests are essentially unidimensional, the Contractor shall analyze item- level test response data with an unrotated principle components analysis.

Item-fit and person-fit indices shall be computed for each item and each examinee using the three proposed configurations.

The degree of misfit for each of the three configurations shall be tabulated across items and examinees for each of the subjects being field tested in 2013. Critical values for persons and items to be considered as misfit shall be determined in consultation with CDE and the Colorado TAC.

The Contractor shall calculate the standard error of measurement for each examinee, and the distributions of SEMs across the theta continuum be compared for each configuration. This will allow the relative precision of the different models to be compared.

The Contractor shall calculate IRT parameters and item-fit statistics for all field test items using publicly available software. The Contractor shall also provide CDE with copies of software including one research license for each of the two software programs and all necessary information needed to perform replication analyses.

Reporting Recommended Changes

After analyzing operational data, The Contractor's psychometric, development, and managerial staff shall provide a report to CDE with recommendations for changes in *process* for item development and test administration.

A.9.3. Operational Analysis. In addition to the analysis of results performed for the field test, test-level statistics and student scale scores shall also be reported for the operational assessments.

The Contractor shall provide the following item level statistics for each item used on the operational test - item mean score and item score-test score correlation. For selected response items the Contractor shall also provide for each possible response option (including the keyed response) the percent of low, middle, and high scorers who selected each option, proportion of all examinees who selected each option, and the option discrimination. For non-selected response items the Contractor shall provide the proportion of low, middle, and high ability students plus the total proportion of all examinees achieving each score point.

For items scored by either human or AI scoring that receive second check scores, the Contractor shall provide the following measures of inter-rater reliability—total count of examinees who received second scores, percent of perfect agreement, percent of adjacent scores, and percent of non-adjacent scores. If a rubric has multiple dimensions, these inter-rater reliability measures shall be calculated for each separate dimension individually.

Items shall be screened for DIF using the Mantel-Haenszel procedure and its extensions to polytomous data. Groups of interest shall be determined in consultation with Colorado and the TAC. Both the group of interest (the focus group) and the group to which it is being compared (the reference group) shall have at least 300 members in order for estimates of DIF to be reliable. DIF analyses shall be performed if both groups being compared have at least 300 members. These CTT-based statistics shall be calculated within the Contractor's item-banking system using industry-standard methods as detailed in the previous section. Alternate DIF detection methods for use with groups smaller than 300 members are being investigated.

The Contractor shall provide IRT parameters and item-fit statistics for all items used operationally. The Contractor shall use publicly available software.

If the theta estimation method is chosen for the derivation of examinee scale scores, then these calculations shall take place during the scoring and reporting process. As noted for field test analysis, the code that carries out these calculations is embedded within the Contractor's scoring system and is proprietary, which the Contractor shall make available to Colorado or any third party contractors in standalone form for validation with the completion of an appropriate licensing agreement.

Examinee theta scores shall be produced. Scaled scores shall be linear transformations of the theta scores onto a reporting scale determined by Colorado with advice from the TAC and the Contractor. The Conditional Standard Error of Measurement (CSEM) associated with each examinee theta score shall also be calculated and placed on the reporting scale and shall be used to place a confidence interval around the reported scale score.

The Contractor shall provide the following IRT-based test level statistics—the test characteristic, information, and CSEM curves. In addition to CSEM estimates, the Contractor shall provide traditional CTT-based estimates of reliability (coefficient alpha) and SEM. The Contractor shall also provide raw test score means and standard deviations for each operational test form. They shall be included in the technical manual.

After completing operational data analysis, The Contractor's psychometric, development, and managerial staff shall provide a report that includes recommendations for changes in *process* for item development and test administration that may improve the efficiency of the program while not demonstrably altering the measurement characteristics of the assessment.

A.9.4. Scaling and Standard Setting.

A.9.4.a. Vertical Scale Design. The Science and Social studies assessments will not include vertical scaling.

A.9.4.b. Scaling. The exact model to be used for scaling the summative assessments shall be dependent upon the IRT model selected by CDE after the administration of the standalone field test.

The scaling of the summative assessment shall be accomplished through the application of IRT to student scores on the assessments. The Contractor shall establish the base scales in the first year of operational administration of the assessments. The Contractor shall work with CDE and the Colorado TAC to determine the most useful metric for the scale of the new assessment. Student theta scores shall be estimated using IRT, and they shall be transformed to the reporting metric via a linear transformation and rounding to the nearest integer.

All items being used operationally shall be field tested and calibrated with the appropriate IRT model. All field test items shall be assessed for their fit to the IRT model during the field test analyses, and each field test item with poor model fit will be closely scrutinized both by the Contractor's staff and during data review to determine if its poor fit is due to flaws within the item.

Model fit shall again be assessed during the analyses of the operational administration results.

Item misfit analyses shall mainly be used to identify candidates for deletion from the equating sets because the inclusion of items with poor fit statistics has the potential to introduce error into the equating relationship. If an item displays a significant amount of misfit (particularly an item that exhibited normal levels of fit the last time that it was used), the item shall be checked for problems and may be dropped from the equating set after consultation with CDE.

The Contractor shall use graphical methods to assess model fit. This shall be accomplished by plotting the empirical versus the predicted probabilities of a correct response (dichotomous items) or item score (polytomous items) by ability level. Additional quantitative measures of item fit will also be calculated. Specific fit statistics will be identified after the IRT model to be used for the assessment has been chosen.

Student level score reliability shall be calculated for each student at the time of scoring. Reliability shall be expressed through the Conditional Standard Error of Measurement (CSEM) derived using IRT. This will be reported in conjunction with student scale scores in the form of a 95% confidence interval around the reported scale score.

The maintenance and monitoring of the scale score results across years will be addressed in the section covering linking and equating.

A.9.4.c. Standard Setting (Educator Meeting). Ways to utilize 12 grade ACT scores from the previous year in the Standard Setting process will be investigated. Ways to utilize 2011 8th grade Trends in International Mathematics and Science Study (TIMMS) results in the Standard Setting process will be investigated.

A Bookmark standard setting approach shall be used to set performance standards on the new Colorado summative assessments (see Cizek and Bunch, 2007, pp. 155-191) for a detailed explication of this method) combined with as much confirmatory evidence as is available.

Standard setting panels of k-12 educators, higher education educators, as well as representatives from the business community as appropriate, must be included in the process. The Contractor should plan on 8-10 member, content specific panels for each grade. The standard setting meeting shall begin with training on the procedures for the standard setting. Standard setting materials shall be shared with CDE with a minimum of three days for review. Revisions to materials recommended by CDE will be made prior to the standard setting. The standard setting shall include three rounds of ratings, the first of which begins at the conclusion of the training. The second and last round shall include impact data for the panels to consider.

The Contractor shall investigate ways to connect proficient performance on the grade 12 assessment to performance in college and to other measures of

workforce readiness. As operational data from the new Colorado summative assessment is accumulated over time, the relationship between the cut scores set in the standard setting and work readiness shall be empirically examined by the Contractor. The Contractor shall also assist in developing communications with the field regarding potentially changing cut scores.

A.9.5. Linking and Equating. The Contractor shall post-equate the summative assessments using the "Non-Equivalent Groups Anchor Test" (NEAT) design.

The anchor test shall be selected to be a representative sample of the test as a whole in terms of content, and items will be placed as close as possible to their location in the previous year's test form. The results of the field test shall be used to determine what item types should be included in the anchor test. Item types in the linking set shall be chosen to be representative of the item types in the test as a whole to the greatest extent possible.

The operational equating analyses shall be conducted using a sample of students from a set of "priority districts" that form approximately 30% of the student population in Colorado (about 18,000 students per grade). The districts shall be chosen to mirror the demographic characteristics of Colorado's diverse student population, including ethnicity, gender, limited English proficient and special education students, supplemental education services, geographic regions, urban/suburban/rural classifications, and other demographic characteristics identified as critical by CDE and the TAC. The priority districts will be reviewed and approved by the CDE prior to their implementation. Their responses shall be processed first, allowing statistical analyses to begin before hand-scoring of constructed responses has been completed.

The *Calibration, Equating, and Scaling Specifications* (CES Specs) document will explain the entire equating process from preparation to cleanup. The lead psychometrician shall create this document and send it to CDE for their review and approval. If CDE desires, we can also assist as needed in securing TAC review and approval.

After the document has been approved by all relevant parties, the next activity in the equating process shall be the "dry-run," which allows all participants to become familiar with the procedures to be used for the equating and to check that all software is properly configured. All analyses for linking and equating scaled scores shall be independently conducted by both the lead research scientist and a second research scientist. Their results shall be compared at multiple points during the equating, and any discrepancies will be resolved before proceeding with the remaining stages of the analysis.

The next activities shall entail the creation of the data and command files for input into the IRT software (MULTILOG 7, Thissen, 2003), which shall be used to generate the initial item parameter estimates. The parameter estimates then shall be examined for out-of-range results. Also, item fit analyses take place at this point in the process. If items are flagged for possible anomalies or unexpected misfit, the data and items will be examined to check that these are not due to item publishing or data errors. After these are ruled out, the Contactor's psychometric staff shall address remaining anomalies by fixing the out-of-range parameters for flagged items to reasonable values such as fixing discrimination values to a minimal positive value, fixing difficulty values to a minimum or maximum of a fixed range, or setting pseudo-guessing parameters equal to the reciprocal of the number of SR item options. Decisions shall be made on a case-by-case basis in consultation with CDE. In extreme cases the item could be suppressed from use as an

operational item, but this would only be done after discussion with and at the direction of CDE.

For all horizontal equating, the parameters from the current form shall be placed on the base scale for its subject and grade. The base scale for science and social studies shall be the scale from the 2014 administration. Horizontal equating shall not take place for the assessments during the administrations where the base scales are being established. When horizontal equating does commence, anchor sets for horizontal equating shall come from the immediately previous administration and will form approximately 30% of the form. Since each year's items are placed in the metric of the base scale, operationally the equating shall be determining the constants *A* and *B* above that shall allow the parameter estimates from the current administration to be placed in the metric of the previous administration (which will be in the metric of the base scale as a result of the previous year's equating).

After IRT parameter estimation issues have been resolved, MULTILOG shall be rerun as necessary to produce the final parameter estimates for each subject and grade form. The process shall then move to the next stage, anchor item parameter stability checking. As such, the Contractor shall use the following analyses to identify items as candidates for removal from the anchor set. This is a judgmental process that depends not only on differences in item parameters but also on the items that would remain in the anchor set after removal, the relative effect that removal would have on the equating relationship, and other similar factors. Therefore, while the Contractor will identify items as candidates for removal, CDE shall have the responsibility to make the final determination of the composition of the anchor sets.

Item parameter stability analyses shall be conducted to identify items in the equating set that appear to differ significantly in their statistical properties between their appearance on the target and new forms. The results of these analyses shall be considered together with the characteristics of the reduced anchor set. The benefits of removing a possibly malfunctioning item from the equating set versus the risks of having a reduced item set that is too short or is unrepresentative of the larger test form should to be weighed. The Contractor shall produce a summary of the above analyses and shall confer with CDE during the course of the equating to identify the final set of anchor items.

After the final composition of the equating set has been approved, the Contractor shall rerun the Stocking-Lord equating software using the final equating set to produce the final equating constants. These constraints shall be applied to the item parameters from the final MULTILOG run to produce the IRT parameters that will be used for scoring students.

The final step in the equating process shall be to use the IRT Score Estimation Program (ISEP) to produce scaled scores for all students in the equating sample. This is a standalone version of the scoring code within the Contractor's scoring engine and is proprietary to the Contractor. It will, however, be licensed to CDE and any designated verification contractors upon completion of an appropriate licensing agreement. These scaled scores shall be used to determine the predicted results of the assessments. These predicted results shall be compared to historical data from earlier administrations (if available) and shall be shared with CDE for their approval prior to the finalization of the equating and the initiation of scoring and reporting activities. Written approval of the results from CDE shall be required before scoring and reporting can begin.

Students taking the paper version will be included in the operational equating. Items that appear on in the same form on both the paper and online test forms (e.g., non-technology enhanced items) will be treated as the same item, and items that are "clones" of or that are otherwise replacements for technology enhanced items will be treated as separate items from the TE item within the equating. In this way the scale for the paper version will be brought onto the overall reporting scale, with a strong anchor of items common between the paper and online versions of the test.

A.9.6. Plans for Establishing Technical Adequacy.

A.9.6.a. Peer Review Requirements. The Contractor shall assist CDE in all areas necessary for a successful Peer Review of the Colorado student assessments. The Contractor shall work closely with CDE in planning activities; processing and compiling data; determining and providing ad hoc data analyses; and conducting alignment, linking, validity and unintended/intended consequences research studies as required to facilitate the state's successful completion of the Peer Review process.

A.9.6.b. Alignment Studies. The Contractor shall arrange for an external validation study for the alignment of the summative assessment, providing that vendor with access to the item-level information necessary for completing the study. CDE shall have final approval of the 3rd party performing the study, while the Contractor shall have the contractual and payment responsibilities for seeing that the study itself is completed.

A.9.6.c. Establishing Comparability. The goal of maximizing comparability between accommodated and non-accommodated test forms and administrations must be paramount throughout the development process. The degree of success of these efforts will be researched and reported post administration. The Contractor shall establish comparability between accommodated and non-accommodated test forms and administrations, including between paper-based administration and computer-based administration.

A.9.6.d. Technical Advisory Committee (TAC). The Contractor shall work with CDE to plan and participate in TAC meetings. All psychometric processes, including test design, scaling, equating, standard setting and validation procedures shall go before the TAC for review and must receive CDE approval. The TAC meeting costs shall be reconcilable, such that CDE shall not be responsible for paying the Contractor for a meeting that does not occur. There shall be three, two-day TAC meetings each year in Denver, Colorado. The Contractor shall be responsible for securing a location and providing continental breakfast and lunch for all attendees. At least two of the Contractor's staff members shall attend each meeting in person. Additional representatives from the Contractor shall be available as needed upon CDE request. With prior approval from CDE, these additional personnel may participate via teleconference or via another distance communication technology. Up to eight CDE staff members will participate.

The Contractor shall fund four members in total, two from Colorado, and two from out of state. TAC members shall be given a $1,500 honorarium per day. The Contractor shall also reimburse the TAC members for meals, mileage or airfare, rental car or cab fees, and lodging. An agenda for each TAC meeting will be drawn up by the Contractor's staff and distributed to CDE and TAC

members prior to each meeting. Attached to each agenda will be the background materials and questions to be reviewed by the TAC and resolved by CDE.

Each TAC meeting shall commence with a Contractor staff member making a presentation of the issues to be discussed. The length of that presentation and the format (PowerPoint, etc.) shall be tailored to the issues presented at each particular meeting. The Contractor's staff shall facilitate the TAC members' discussion of each agenda item, noting the new questions that arise, the recommendations made, and any resolution of technical challenges agreed upon. During the meeting, a Contractor staff member not facilitating the meeting shall take minutes. Those minutes shall be distributed to CDE and TAC members within two business days of the close of each TAC meeting.

A.9.6.e. Technical Report. The Contractor's Psychometric and Research Services staff shall produce a technical report and yearbook. The Technical report shall include all relevant psychometric information for each test, including but not limited to the following: purpose, test blueprint, alignment of the test to the relevant CDE content standards, test development procedures, reliability data, validity data, accommodations and testing of students with special needs, security, administration procedures and issues that arose during administration, scoring, psychometric analyses (such as item analyses, DIF analyses, distractor analyses, and fit statistics), IRT calibrations, equating and scaling, standard setting, opportunity to learn data, reporting procedures and formats, special studies, and appropriate use and interpretation of test data. The appendices, organized as yearbooks, shall provide detailed statistics on the various assessments for a given academic year. Each year a new yearbook will be added. In addition, data and research completed building the validity argument for the Colorado assessments will be added to the technical report.

The Contractor shall deliver a Technical Report and Yearbook by August 15 of each operational administration year. An administration summary will be prepared for the standalone field test, but a formal technical report will not be prepared. This summary may be incorporated into the following year's Technical report. The Contractor's lead psychometrician shall facilitate the review of the annual Technical Report and Yearbook by CDE, CDE's Verification Vendor, and the TAC before the Contractor produces the copy for publication.

The Contractor shall report detailed results of all test administrations, as well as full details of all development and research activities conducted within that time frame, including item development and review, form construction and review, field testing, equating, validity, comparability, DIF, and reliability studies, etc., and any other activities conducted in support of the Colorado Student Assessments since the last reporting period beginning with the first operational administration. Exact contents of the technical manual will be determined annually in collaboration with the TAC. The report must meet comply with the U.S. Department of Education's *Standards and Assessment Peer Review Guidance* (or similar document developed in the future).

A.9.7. Irregularity and Data Forensic Analysis. The Contractor shall provide CDE with a comprehensive suite of data forensic analyses designed to identify several unique potential sources of irregularities in Colorado's test data.

The Contractor's scanners shall capture item responses by measuring the degree to which infrared light is absorbed by carbon (a primary component of a Number 2 pencil's graphite) in the answer bubbles. This corresponds to the degree and intensity of graphite coverage in a bubble. The Contractor's suite of data forensic analyses shall identify testing irregularities that may occur due to potential improper behavior initiated by students, educators, or other school administrators. An overview of the types of data forensic analyses to be performed is provided below.

Erasure analysis. As part of the processes noted above, the Contractor shall perform checks on marks provided on student answer sheets by counting erasures. The Contractor shall provide CDE with reports summarizing wrong-to-right (WTR), right-to-wrong (RTW), and wrong-to-wrong (WTW) response changes at the school, district, and state level. Schools and districts with large counts of erasures will be flagged in the summary reports for further follow-up and investigation by CDE. Comparable analysis should be conducted with the computer-based form that could track students changing answers simultaneously or putting in answers at a rate inconsistent with reviewing the prompt and independently answering.

Response pattern similarity analysis. As an indicator of possible incidences of collusion among students, the Contractor shall investigate similarity within pairs of student response patterns. Pairs of students with statistically improbable levels of similarity in their response patterns (e.g., higher-than-expected incidences of two students selecting the same incorrect response option across numerous items) shall be flagged for further follow-up and investigation by CDE.

Aberrant response patterns. Recognizing that certain types of improper behavior related to test-taking, such as students being exposed to compromised items prior to sitting for the exam or having access to unapproved reference materials during the testing session, can result in what are commonly referred to as aberrant response patterns (i.e., student response patterns that are inconsistent with what is expected given the test's statistical measurement model), the Contractor shall examine the reasonableness of student response patterns by computing and evaluating person-fit statistics, flagging for CDE the students with statistically improbable patterns of responses, as indicated by their person-fit statistics.

The next three analyses are contingent on the Contractor's ability to obtain student data from the prior year that can be effectively linked to data from the current administration.

Large score changes for students across administrations. Utilizing statistical prediction models, the Contractor shall conduct student-level longitudinal score comparisons across testing administrations, flagging students with statistically improbable gains or decreases in scores across years for further follow-up investigation by CDE.

Large score changes for classrooms, schools, and districts across administrations. A variation on student-level score change analysis, this analysis evaluates longitudinal test score changes at the classroom, school, or district level. As with the student-level analysis, classrooms, schools, or districts with observed test scores significantly greater or less than scores predicted by a statistical model will be identified for further follow-up and investigation by CDE. For example, if students from one classroom, on average, showed significantly larger-than-expected score gains from one year to the next relative to matched samples from other classrooms, that classroom would be flagged for further follow-up and investigation by CDE.

Impact data longitudinal comparisons. In instances where the observed impact data for a particular classroom, school, or district are under suspicion of irregularities, Contractor will compare distributions of students' scores near the cut scores for the current and previous administrations. For example, if 40 percent of students in a given classroom passed an assessment last year, but 80 percent of these students passed that assessment this year, the Contractor shall evaluate the likelihood of the higher passing rate by examining how close failing students came to passing the test in the prior administration. Additionally, the Contractor shall use statistical models to predict pass rates based on data from the previous administration and compare observed impact data with predicted impact.

Within a reasonable amount of time (to be determined with CDE), following the initial administration, the Contractor shall provide erasure analysis reports summarizing WTR, RTW, and WTW answer changes by school and district. For the initial administration, additional deliverables for more in-depth data forensic analyses, including response pattern similarity analyses, longitudinal analyses of score and impact data changes over time, and person-fit results, will be delivered separately by August 31, 2014. The Contractor and CDE shall use this additional time to thoroughly evaluate the data forensic outcomes from the initial administration before adjusting or finalizing the data forensics protocol for Colorado's assessments. This additional time also shall allow CDE an opportunity to put in place (or to evaluate existing) procedures related to receiving and interpreting results from data forensic analyses. Assuming that a data forensics protocol is approved by CDE and finalized following the initial administration, data forensic analysis outcomes shall be delivered closer to the end of the administration window in subsequent years.

All data forensic analysis deliverables shall be provided in a secure manner in the form of electronic summary files, with flagged students, classrooms, schools, or districts clearly indicated. In addition to data forensic analysis summary files, the Contractor shall provide technical documentation in the Technical Report explaining the specific methods and flagging criteria used in the analyses as well.

A.9.8. Contractor Research Services for Colorado's Assessment Programs.

In addition to test development delivery, the Contractor shall provide expert advice and judgment in support to CDE's leadership position. The Contractor shall bring the resources and expertise of its group of experts and any required national expert consultants to bear on the design and implementation of new assessment programs requested by CDE. The Contractor shall assemble a Colorado Research Alliance to assist CDE in addressing issues associated with post-secondary and workforce readiness and to respond to changes in federal legislation, including the Elementary and Secondary Education Act, and/or the implications of Common Core Standards and peer review documentation requirements.

In this alliance, the Contractor shall collaborate with both national experts and Colorado experts in the area of assessment. This group shall serve as an external advisory group to CDE and the Contractor shall design and conduct specific research studies in conjunction with CDE at no additional cost to the state.

Suggested members of the Colorado Research Alliance are presented in Attachment 3. CDE will have final approval of membership.

A.10. Training and Support

A.10.1. Work Plan. The Contractor shall maintain the Colorado Student Assessments foundation in test design and scoring, to build upon current policy and practice and reduce confusion during the transition. The Contractor shall provide clear and concise training materials for educators that may be discussed in a group meeting or studied alone on a computer or read in hard copy. The Contractor shall provide training to educators in spring of 2013. Each year, the Contractor shall review this training and revisions shall be made based on feedback from CDE, teachers, and stakeholders. The Contractor shall provide robust call center support for teachers with questions about the assessment and the process for submitting evidence sent to the schools. The Contractor shall adhere to the mutually agreed upon detailed schedule that outlines the tasks and durations for each year of the Contract. The draft schedule is included in Exhibit B.

A.10.2. Training. The Contractor's program team (including their technology consultant and psychometrician) shall develop draft training materials (hand-outs, PowerPoint slides, manuals) for CDE review, revision, and approval. . A month prior to in-service training, CDE shall receive training materials such as manuals, PowerPoint presentations, and handouts. The Contractor shall preview each training session and webinar for CDE staff at least two weeks prior to the scheduled training dates and make any necessary changes to the training materials before use. All trainings sessions will include oral and visual presentations and will incorporate interactive technology as appropriate. Training content and materials shall be approved by CDE before use.

For all face-to-face trainings the Contractor shall be responsible for all logistics and shall verify that facilities meet Americans with Disabilities Act (ADA) accessibility requirements. The Contractor shall ensure the provision of all training accommodations that are required by the ADA. All WebEx trainings will be archived and available for future use or reference.

The Contractor's Program Manager shall be available to assist CDE with test preparation and interpretation in-service training.

The follow table represents the trainings for which the Contractor will be responsible for:

Colorado Summative Trainings							
Meeting Title	TAC Members	CDE Staff	Pearson / ETS Staff	Educators	Meetings per year	Number of Days	Face-to-Face or WebEx?
Assessment Administration Training	-	2	2	Minimum of 50 No more than 120	4	1	Face-to-Face in FY13-FY14 (WebEx in FY15+)
Technology Director Training	-	2	2	Minimum of 50 No more than 120	4	1	Face-to-Face in FY13-FY14 (WebEx in FY15+)
Understanding the Assessment Results Training	-	2	2	Minimum of 50 No more than 120	4	1	Face-to-Face in FY14 (WebEx in FY15+)

Colorado Summative Trainings							
Meeting Title	TAC Members	CDE Staff	Pearson / ETS Staff	Educators	Meetings per year	Number of Days	Face-to-Face or WebEx?
Test Readiness Tool Training	-	1	2	-	4	1	WebEx
Site Readiness Training	-	1	2	-	4	1	WebEx
Additional training: Topic to be determined annually	-	1	2	-	4	1	WebEx
Initial Item Development Meeting	-	4	7	18	1 (FY13 only)	3	Face-to-Face
Item Development Meeting	-	4	6	12	2	2	Face-to-Face
Content and Bias Review	-	4	7	32	1	2 (3 in FY13)	Face-to-Face
Range-finding Meeting	-	4	7	12	1	2	Face-to-Face
Anchor Validation Meeting	-	4	7	N/A	1	1	WebEx
Initial Data Review	-	4	6	20	1 (FY13 only)	1	Face-to-Face
Annual Data Review	-	4	6	20 (no stipend)	1 (FY14+)	1	WebEx
Cognitive Labs	-	3	5	9 (no stipend)	2 (FY13 only)	5	Face-to-Face
Standard Setting	-	5	12	60	1 (FY14 only)	3	Face-to-Face

A.10.2.a. Technology Director Training.

Detailed training sessions shall be conducted for the Colorado Technology Directors. The Contractor shall provide a series of online training sessions that include live WebEx sessions. The Contractor shall also provide static online materials to be available for on-demand review. The WebEx training sessions shall be recorded and posted online as well. Training sessions shall include 1) PearsonAccess™ (the online test management system); 2) technology readiness tools and procedures; 3) proctor caching tools; 4) school network configuration and online system testing (site readiness); and 5) TestNav training. The

Contractor's in-state technology consultant shall oversee the development of all training materials and provide on-site support for these training sessions.

A.10.2.b. Assessment Administration Training for DACs. The Contractor's training shall focus on the ordering and receipt of materials in the district, the distribution of materials within the district, collecting materials for return to the Contractor, administration of assessments, and the policies and procedures for maintaining security at all times. The training shall also include the DAC's role in online administrations and security procedures related to online testing. Training sessions shall be recorded and archived for use in potential future training or reference resource. The Contractor's assessment manuals shall include the same types of information.

The Contractor shall supply online and conference call opportunities to provide training for those unable to attend a live session and to reinforce training for those who did attend. The Contractor shall provide online training using WebEx conferencing. Training sessions shall be delivered prior to each Colorado Student Assessment administration: one training session prior to the fall administration and up to three training sessions prior to the spring administration. Each training session shall include material on test administration and technology issues.

The Contractor's WebEx training shall include a "live" simulation of a loss of connectivity. This shall allow participants to see what happens and how to deal with such an occurrence. In the live online training environment, participants shall be able to ask questions and share experiences. WebEx presentations shall be recorded and posted online for use in school-level training.

The Contractor shall update each presentation four weeks prior to each Colorado Student Assessment administration. Updates shall show new functionality in the online system since the last administration, any changes since the last administration, and hot topics for online testing.

A 10.2.c. Assessment Administration Training for SACs and Test Administrators. The Contractor shall create training materials and provide customer support specific to online assessment. The Contractor shall collaborate with CDE to determine additional training that may be needed, given changes in the summative assessment program and challenges in administering the Colorado Student Assessments. The Contractor shall obtain CDE approval of manual, WebEx (or other online service) presentations, and CD contents before producing the supplemental training instrument. CD contents shall include Microsoft® PowerPoint® presentations in Windows® and Macintosh format, forms that participants can print, and other materials. CDs will be produced for each DAC and SAC. These materials may be used by DACs and SACs for training of district and school staff.

A.10.2.d. Understanding the Assessment Results Training. In conjunction with the development of the Interpretive Guide, The Contractor shall develop training sessions to support analyzing and understanding local data in order to inform curricular and instructional improvements at the classroom, school, and district levels. These sessions shall include a visual as well as an oral presentation and may include other types of interactive technology. Training sessions shall be recorded and archived for use in potential future training or as reference resources.

A.10.2.e Additional Training. The Contractor shall provide an annual in-service training session to teachers regarding an important assessment issue, to be mutually determined by CDE and by Mr. Jim Hill.

A.11. Customer Service

The Contractor shall provide technical and logistical support in a responsive manner which minimizes school personnel and student burden, disruption and inconvenience.

A.11.1. District Assessment Coordinator Routine Communications/Notifications. The Contractor's program management team for the Colorado Student Assessments shall work with CDE to determine the types of communications and notifications that should be directed to the DACs. The communications shall be provided to CDE for sending via listserv that is currently in use.

A.11.2. Telephone and E-mail Support. The Contractor's Customer Service Center (CSC) personnel will be trained specifically for the Colorado assessment program. Customers will have access to live support via email and a dedicated toll-free phone number from 7:00 a.m. to 6:00 p.m. Mountain Time each weekday, excluding federal and Colorado state holidays. Customer service personnel must be able to clearly articulate spoken English. The customer service center must be located within the 48 contiguous states. CDE reserves the right to approve the Customer service lead.

When customer service staff is not available to take a call, a voicemail service system must be available to record the caller's message. Messages must be returned in a timely manner, generally within one hour or less but always within one business day.

DACs may also submit questions via e-mail to the Project Manager and must receive a response to their e-mail within 24 hours.

A.11.3. Issue Resolution System. Customer service staff shall have a system to ensure that issues raised by DACs have been satisfactorily resolved. For example, if a DAC has requested additional assessment materials, the system shall ensure that 1) the DAC is given instructions on how to order the materials online and that 2) the customer service representative will verify that the order has been placed and fulfilled. The Contractor shall notify CDE of any communication with the field regarding urgent or sensitive issues. If an issue arises that requires executive engagement and authority for resolution, Contractor's internal issue response process will provide proper guidance to Contractor's personnel. This process allows for the evaluation of corrective actions by Contractor's leadership and tracks the issue through closure. The Contractor's program manager will keep CDE aware of the issue and how it is being resolved.

A.11.4. Records of Interaction with Customers. All contacts shall be tracked by the HP Peregrine Service Manager, a secure incident-tracking software tool tailored specifically for the Contractor's Customer Service Center (CSC). With each incoming contact, CSC staff will generate a ticket that enables tracking the incident through to resolution. The system will collect customer name, district, school, date and time of incoming contact, issue description and resolution, and date and time of issues and resolution. Tickets will be archived and ticket numbers will also be provided to the customer. Tickets may be escalated to specialists for their documentation when handling calls to generate a full history of each issue. Sortable reports from the Contractor's incident tracking system will be available to CDE for review in electronic format.

A.11.5. Customer Service Initiated Calls and Communications. All Colorado-specific training for CSC, including any scripts, shall be drafted and provided to CDE for final approval. Additionally, customer service staff may be asked to initiate e-mail communications in unusual circumstances by CDE.

A.11.6. Customer Feedback Survey. The Contractor shall create and administer at least once annually a customer feedback survey, including both close ended and open ended items. The survey will record feedback on customer satisfaction with ordering, fulfillment, security, receiving, returning, customer service, TestNav functioning and other criteria consistent with best business practices. The Contractor will be responsible for compiling responses. The feedback surveys will be available to CDE for review, as well as to be used in planning for the next year's program. Annually, the Contractor will also survey CDE decision makers reviewing its products and services.

A.11.7. DAC Website. The Contractor shall develop and maintain a website for DACs via Contractor-provided login names and passwords to access training and assessment materials. This website will contain both secure and unsecure documents necessary for the DACs to perform their duties and responsibilities. These documents include proctor and coordinator manuals, training manuals, accommodations manuals, data interpretation manuals, as well as various order and request forms. In addition, the site shall provide DACs with access to their district assessment data and scores.

The Contractor's web access management solution will be rules-based, allowing or denying access based on definable user attributes. This propriety web accessed tool, PearsonAccess™, will be configured according to Colorado requirements and access privileges for individuals or groups of users at the state, district, and school levels.

A.11.8. Customer Support. In addition to the "help" functions embedded in the assessment software and automated online or phone in support services, the Contractor shall provide customer support for the installation and use of the online assessment software that includes phone accessible support personal.

The Contractor's staff members in the CSC will be trained on the specifics of the Colorado program. Callers from Colorado will have access to live support via email and a dedicated toll-free phone number. The Contractor's specialists with detailed program information and focused expertise in the database, network, infrastructure, and software components of the Contractor's web-based services will respond to questions that cannot be resolved at the initial point of contact.

B. Alternate Assessment

B.1. General Requirements

Educator Meetings. For all meetings held with Colorado educators, the Contractor is responsible for all costs. This includes all expenses for Americans with Disabilities Act compliant meeting sites, including sign language interpreters and large print as needed; audio visual equipment; internet connections; beverages; snacks; and for all day meetings, lunches. If overnight stay is required, hotel rooms will be billed directly to the Contractor. Each educator receives a stipend or the district is reimbursed for the cost of hiring a substitute at the district's rate during the educator's absence. In addition, educators are reimbursed for travel expenses (mileage, tolls, etc.) and meals during overnight stays. The State of Colorado periodically develops a chart for reimbursement rates. The Contractor shall reimburse attendees based on the state reimbursement rates current at the time of the meetings. The table below presents expenditures for reimbursement.

Educator Meeting Reimbursement

	Description
Stipend or Substitute Reimbursement	$120 stipend if a non-work day for the educator **OR** reimbursement of district for hiring a substitute at the district's rate
Meal Expenses	The per diem rate will be set at the current state (CO) rate at the time of the event. It is only granted to participants who come from out of the local area and who will remain over night in a hotel provided by the Contractor. See below for more information.
Mileage	Mileage rates will be set at the current state (CO) rate at the time of the event See below for more information.
Lodging	Lodging shall only be provided for participants who travel more than 35 miles in one direction to attend the event. Government rates will be applied. See below for more information.
Airfare/Rental Cars/Cab Fares	Airfare, rental cars, or cab fare shall be provided for participants for whom these means of travel would be less expense than if they drove.

NOTE: For current Colorado rates, see: http://www.colorado.gov/cs/Satellite/DPA-DCS/PA/1201542229293

Throughout this document, the term "Contractor(s)" is also assumed to include subcontractors where appropriate and applicable.

B.1.1. Professional Standards/Best Practices. The Contractor shall ensure that all materials, practices and procedures developed under this Contract for the Colorado Alternate Assessments (CoAlt) meet relevant professional standards such as those contained in the Standards for Educational and Psychological Testing published by the American Education Research Association (1999 or most current version), and the various guidance and checklist documents published by the Council of Chief State School Officers, such as the Quality Control Checklist for Item Development and Test Form Construction, particularly in terms of privacy, reliability, validity, opportunity to learn, accommodations, scoring, reporting, and documentation.

The Contractor shall inform CDE when implementation practices or policies are not consistent with the best educational research and practice. The Contractor shall be

responsible for clearly communicating the risks of proceeding outside of conclusions of best educational research and practice standards. If CDE elects to proceed, the Contractor shall work to make necessary corrections and design appropriate mitigation strategies.

B.1.2. State and Federal Requirements. The Contractor shall ensure that all materials, processes, and procedures developed under this Contract meet relevant State and Federal legal requirements, including requirements under the Elementary and Secondary Education Act and peer review, as well as the Individuals with Disabilities Education Act. Throughout the life of the Contract, and any extensions, the Contractor shall communicate to the State when it concludes that the program is no longer meeting State and Federal requirements and shall provide corrective options to the State for consideration.

B.1.3. Communication. The Contractor shall assist CDE in explaining to the media, the public, stakeholders, the court, and/or other applicable entities why the tests are valid and reliable assessments that are appropriate for their intended purpose. The Contractor shall collaborate with CDE to develop external communications materials for the Colorado alternate assessments to promote understanding and acceptance for the new alternate assessments.

These external communications materials include, but are not limited to, interpretive guides which will accurately communicate information in clear language for parents, teachers and other stakeholders, related to cut scores, proficiency levels and descriptors and scale score, including how they work, why they are important, and how they can be properly interpreted. The interpretive guide will show educators how to extrapolate and use test results to support instructional plans.

The Contractor shall use brochures, PearsonAccess™, group training sessions, face-to-face meetings, or other requested formats to make assessment results available and understandable to all stakeholders. This includes helping CDE provide information to the media and to technical advisory committee members, or similar groups, for the purposes of accountability and public release of testing information.

B.1.4. Cooperation with Quality Control Contractor and CDE Staff. CDE intends to contract separately with a third party quality control contractor for all of its assessments. The quality control contractor will review the Contractor's work, meet with the Contractor's staff, and conduct on-site visits at all of CDE's Contractor's facilities to assure CDE that 1) the Contractor meets required schedules and quality control requirements and performs services in accordance with contractual requirements; and 2) file exchanges are properly coordinated. While working within its corporate guidelines for maintaining security of its facilities, its other clients, and confidentiality of student information and data, the Contractor will cooperate with the quality control contractor and CDE staff to provide access to relevant facilities, personnel, and information regarding services provided hereunder.

B.1.5. Interaction with Verification Contractor. CDE may contract separately with a third party verification contractor on an on-going or periodic basis. The Contractor will be required to share information regarding item parameters; data files (including scan files and command files); and any other information needed to verify the reliability, validity, and quality of the Colorado assessment data and system.

B.1.6. Security. The Contractor shall follow FERPA, state and industry standard security policies, including the provision of confidentiality agreements for all Contractor staff, subcontractors and educators participating in any aspect of this project.

The following table provides an overview of the security protocols for Colorado student assessments and the entities that will assume primary responsibility for implementation.

Security Protocols for Colorado Student Assessment System				
Security Protocol	**Contractor Staff**	**CDE**	**Committee Participants**	**District Personnel**
Sign Security and Confidentiality Agreements	✓	✓	✓	✓
Deliver Security Plan	✓			
Arrange Meeting Logistics to Accommodate Security Requirements	✓			
Maintain Physical Control and Access by Authorized Personnel	✓			✓
Provide Use of Secure FTP Site for File Transfers	✓	✓		
Serialize Field Test Forms	✓			
Shrink Wrap Test Materials	✓			
Provide Secure Delivery and Check-in	✓			✓
Provide Secure Retrieval from Schools	✓			✓
Account for Returned Test Materials	✓			
Confirm with Schools Receipt of Returned Materials	✓			
Provide Weekly Reports for Return of Test Materials	✓			
Do Not Utilize Email or FAX for Transmission of Secure Materials or Information	✓	✓	✓	✓
Limit and Monitor Photocopying	✓	✓		✓
Print Security Statement on Test Forms and Directions	✓			
Provide Secure Destruction of Materials Used During Committee Meetings	✓			
Provide Secure Destruction of Test Materials Upon Colorado Approval	✓			
Provide Secure Delivery of Colorado-Owned Outputs Upon Colorado Request	✓			

Security Protocols for Colorado Student Assessment System				
Security Protocol	**Contractor Staff**	**CDE**	**Committee Participants**	**District Personnel**
Provide Secure Transfer of All Colorado-Owned Items, Reports, Materials, Data, and Equipment Necessary for Transition	✓			

Any breach of security that occurs through the negligence or inaction of the Contractor, such as, but not limited to, failure to adhere to the Contractor's security protocols or allowing raters to remove secure materials from Item Writing Meetings, Item Review Meetings, Data Review Meetings, Anchor Paper Selection, Validation Meetings, or the Scoring Center, will be considered a default on the terms of this Contract.

The Contractor will be required to sign the FERPA Confidentiality Agreement.

Commitment to Stringent Security

The Contractor's Global Information Security and Technology policy shall be implemented by the Contractor's business unit leaders in collaboration with the Director of the Data Security and Business Continuity (DSBC) team. The DSBC shall implement policy and verifies compliance through appointed data security/privacy officers located in all of the Contractor's facilities. Specific focus areas include policy guidance, security procedure training, access and transmission controls, audit activities, and resolution of security issues.

Established and Secure Facilities

All of the Contractor's facilities shall be closed to the general public. Reception areas shall be staffed, and access beyond the reception area shall be restricted, as it shall be with other building entrances. Guards shall be posted at other key entrances where security officers monitor building access directly and via a closed circuit television system. Building access shall be controlled by a proximity card access system. Employees and contractors shall be issued magnetized, photo ID badges after signing a statement accepting responsibility for its proper use. While in the Contractor's facilities, personnel shall be required to wear the security badge in unobstructed view at all times. Visitors to the Contractor's facilities must be approved by a manager, escorted by the Contractor's staff, and wear date-specific badges.

Information about Security Awareness

The Contractor shall continue its Security Awareness Program, an ongoing effort that provides guidance to every employee so they understand company security policies, their individual responsibilities for compliance, and how their behaviors affect the Contractor's ability to protect systems and data. These efforts are built on the principles of confidentiality, integrity, and availability. Security awareness begins immediately with new hire orientation, covering acceptable use of the Contractor's systems, fundamental best practices such as creating strong passwords, proper use of email and Internet access, and responsibilities in reporting security risks. The Contractor's employees shall be required to complete a web-based training module within 30 days of hire.

Specific online courses covering PCI compliance and protecting PII have also been developed. The Contractor's awareness training shall also include an annual refresher course that includes

components on these topics. The Contractor's security policies, security training, newsletters, and printed content shall be available on the Security Department intranet site. It provides a central repository for security content and efforts and is available to everyone in the company. Links to this site are incorporated in most of the Contractor's other business specific Intranet sites.

Employee Handling of Test Materials

The Contractor's test-development methodologies prevent the listing all of the employees who will develop and process CoAlt materials; however, the Contractor stipulates that only employees explicitly assigned to the project handle testing materials, and that these employees will be required to complete a standard Pearson nondisclosure/security form completed by all employees.

Confidentiality Agreements

During item development and item review, range finding and anchor validations, as well as standard setting, the Contractor will have all participants sign a confidentiality and nondisclosure agreement. The Contractor will communicate security protocols to all participants. Participants will not be allowed to remove material from the meeting room during any development or review sessions nor will they be allowed to use personal computers, cell phones, or other communication devices within the meeting environment.

Secure FTP Site for File Transfers

The Contractor will develop and maintain a secure file transfer protocol (SFTP) site for the duration of the Contract and any future amendments. This site will be fully-encrypted and allow for secure transfer of documents between the Contractor and CDE, and any third party vendors. The Contractor will not utilize email or fax for transmission of secure materials or information.

User IDs and Passwords

The Contractor's security module will provide administrative user authentication and authorization services. CDE will be provided control of administrative security features, including: persons allowed to access the system; what level of the system (state, system, school) each user can access (customized to match the naming convention for levels used by CDE); and which administrative functions (enrollments, student data management, order tracking, viewing reports, etc.) each user is permitted to access.

Secure Materials Assembly

To maintain test booklet security, the Contractor will perform the pre-packaging and assembly processes in accordance with CDE requirements and its standard security procedures. Only designated, authorized persons will have access to test materials before and after their scheduled use. All security processes described in the following sections work in concert with Oracle's system inventory controls to produce accurate packing results and inventory traceability. The Contractor will check materials to verify that they have been accurately printed and collated, wrap test booklets into sub-assembly components of a predetermined number of documents and identify them using unique package barcode identifications, and perform a quality check during packaging to verify that the item counts listed on the packing lists correspond with the actual test booklets being packaged. At the packing line, scanners will prompt the packing personnel for which item to scan, in the order in which it must be packed. The Contractor's packaging and distribution system will use custom technology to verify packaging and distribution accuracy through barcode scanning of individual testing materials to their specific shipping container.

Secure Delivery of Test Materials

The Contractor's plan for the distribution and return of materials will focus on maintaining test security, providing accurate handling of all test assessment materials, and delivering these materials to the participating districts in a timely manner. The Contractor's experienced warehousing and transportation departments will maintain the quality and security of material distribution and return materials by using such methods as sealed trailers and hiring reputable carriers able to quickly trace shipments.

Accurate Handling and Timely Delivery

To maintain test security, accurate handling, and timely delivery, the Contractor will create a transportation file consisting of requested quantities of each material type (secure or non-secure) for each participating school within each district. Calculated overages may be provided to large Colorado districts. The Contractor will identify appropriate shipping modes based on shipment size and destination. The Contractor will verify shipping addresses for validity according to carrier files.

Materials will ship directly to the district assessment coordinators responsible for distributing testing materials to the schools, arriving at least two weeks prior to testing. The Contractor will also use its distribution system's tracking capabilities to provide precise status information and corrective action. As secure materials are returned, the Contractor will compare the barcodes of the documents sent to a district to those returned from a given location. The Contractor will provide regular updates to CDE on the status of any unreturned secure materials. The Contractor will generate and deliver a report of any unresolved missing materials to CDE after the scoring window has closed, and after the Contractor has made every effort to locate any missing materials.

Inventory Security

The Contractor will use its automated material inventory system, located within secure warehouse facilities, as the primary security system for all test materials following development (test booklets, test sections, and Supported Performance Task manipulatives). The inventory system will provide an accurate control process that supports the controlled shipment and return of test materials.

Secure Destruction of Materials

The Contractor will provide for the secure destruction of all materials used during test development, committee meetings, and field testing. Annually, the Contractor will provide secure destruction of secure unused test materials six (6) months after the end of the test window, with written permission from CDE. Additionally, the Contractor will provide secure destruction of used test materials twelve (12) months after the test administration window closes, with written permission from CDE.

Solid Security for Colorado

The Contractor will follow stringent procedures in the event of any major data security breach. The Contractor will respond quickly to any suspected breach. Actions the business must take promptly after an actual or suspected breach include the following to contain the breach and investigate the cause:

Determine timing requirements:

- Promptly record all information relevant to the breach, including the cause and effect of the incident and determine whether other systems are at serious risk of future breach.
- Engage specialized consultants to capture relevant information and perform forensic analysis if necessary.
- Follow prescribed legal time limits for notification of persons whose data was breached, if applicable.

Information to be collected promptly:

- The date, time, duration and location of the breach
- How the breach was discovered, by whom and any known details about it
- Information on the compromised data, including: a list of affected individuals by category, data fields, the number of records affected and which, if any, data were encrypted

Analyze legal implications of the breach:

- Analyze the relevant business contracts for notification and other obligations, breach notification requirements and pertinent indemnification agreements
- Identify the countries potentially involved with reference to the location of persons and systems affected by the breach and statutes and regulations potentially triggered or violated by the breach
- Contact local or federal law enforcement agencies, where appropriate.

Working in Concert with CDE

The Contractor's program manager will work with CDE to determine final test administration procedures, including those related to security and confidentiality throughout administration. These will then be included in test manuals and incorporated into test coordinator and administrator training. In addition, a detailed plan for handling general testing irregularities will be developed with CDE that identifies potential types of irregularities, reporting and communications plans, and immediate actions to resolve or mitigate the situation.

B.1.7. Travel**.** As required by the RFP and agreed to by the Contractor, the Contractor will be required to travel to various statewide locations to meet project requirements/training.

All anticipated travel expenses are included in the Contract price. Therefore, the total price quoted for this project includes any travel, lodging or per diem costs to be incurred by the Contractor's personnel to provide services requested. NO ADDITIONAL COSTS WILL BE REIMBURSED.

B.1.8. Subcontractor Requirements. CDE is allowing subcontracting to occur in the scope of work. CDE will allow subcontracting only under the following circumstances:

- All subcontractors must have primary offices and complete the work within the continental United States.
- CDE reserves the right to reject any subcontractors if it so chooses.

B.1.9. CDE Sign Off. All procedures followed in the development, production, administration, scoring and reporting of the CoAlt shall be made available for review by CDE, if requested, and, as determined by CDE, may be subject to CDE approval.

B.2. Corporate Capacity and Personnel

B.2.1. Organizational Structure. Organizational charts, including identification of Executive and Key Personnel, for the Contractor as a whole and for the CDE project team specifically, including subcontractors where applicable, are provided in Attachment 1. The chart clearly indicates lines of authority and communication within and among the Contractor's departments and subcontractors, where appropriate.

The Contractor has indicated that Mr. Jim Hill, Vice President of State Services with the Assessment and Information group, will provide executive support for the CoAlt. This executive team member shall be available both during and outside of normal business hours to assist with any urgent situations. Changes to the assigned executive team member, except for those resulting from separation of services, require prior written consent by CDE. The replacement shall have qualifications which meet or exceed the original staff member proposed or the staff member holding the position previously and shall be approved by CDE.

B.2.2. Time Allocation of Key Personnel and Services. Attachment 2 presents the list of key staff with staff member's assigned responsibilities and time allocated to the project. In no case shall an individual be assigned to more than one full-time equivalent position, including work outside of Colorado Contracts.

The Contractor shall assign one person to function as the Program Manager. That person must be responsible for all activities required by the project and will serve as the main contact person between the Contractor and CDE. The Program Manager shall have the authority to make decisions and commitments on behalf of the Contractor, subject to CDE approval.

CDE reserves the right to interview and approve all key staff. Throughout the life of this Contract, and any extensions, changes to the assigned program manager, program coordinator, lead psychometrician, content development lead, content specific area lead, and special populations consultant, except for those resulting from separation of services, will require prior written consent by CDE. In the event that CDE requests removal of specific Contractor personnel, the Contractor shall provide acceptable replacement(s) with no impact to the project. Replacement(s) shall have qualifications which meet or exceed the original staff member proposed or the staff member holding the position previously and shall be approved by CDE.

All personnel who will work on-site at CDE or school sites may be required to be pre-approved for site access via a criminal background check paid for by the Contractor.

B.2.3. Staff Qualifications and Experience. CDE requires that the Contractor's psychometric team will not only execute routine functions, but will also provide expertise to guide the psychometric decisions that will need to be made and re-evaluated as the program evolves. The team shall provide psychometric options with strengths and challenges and its recommendations along with rationale. In addition, the team must include personnel with both extensive experience and psychometric knowledge, as well as the decision-making authority to quickly address and remedy the unexpected challenges.

For all meetings involving educators, facilitators must be familiar with best practices, state and federal laws, procedures, and regulations concerning assessment. Facilitators must also be familiar with academic instruction of students with significant cognitive disabilities and the educational and assessment landscape. Facilitators must be able to clearly articulate spoken English and create user-friendly written materials and visual training aids. Facilitators must have demonstrated successful experience in leading large-

group trainings including webinars and meetings as fit their responsibilities. CDE reserves the right to not accept any training and meeting facilitators identified if it so chooses.

B.3. Program Management

B.3.1. Key Activities and Transfer Dates.

B.3.1.a Schedule of Activities. The Contractor shall adhere to the CoAlt Project schedule with key activities and milestones related to the field and key transfer dates between the Contractor and CDE related to development, production, shipping and receipt, administration (of paper-based and online assessments), scoring (data processing, reporting and psychometric activities). The draft schedule is included in Exhibit B. The deliverables presented in Exhibit C shall be subject to liquidated damages.

B.3.1.b Project Schedule. The Contractor shall follow the baselined project schedule presented to CDE at the beginning of each development cycle that identifies the tasks, subtasks, beginning date, end date, party/functional group responsible for each step in the process, dependencies, detailed hierarchical task descriptions, critical milestone designations and early trigger and milestone identification. The schedules shall be integrated, regularly reviewed, updated, and made available to project stakeholders in a clear and understandable format. The overall schedule shall be incorporated into the comprehensive project management plan. Management of the master schedule shall include identifying and communicating tasks and deliverables, tracking and communicating progress, evaluating the status and availability of resources, and identifying project and program managers, resource managers, team members, and executives.

The Contractor's project schedules shall be developed with MS Project® software, according to a clearly defined and highly integrated process. CDE schedules shall be carefully monitored by the program team to verify that resources will be available when they are needed. Assessment projects shall be run according to schedule. The Contractor shall use its standard, comprehensive work breakdown structure (WBS) as the basis for every assessment schedule. The WBS is extensive and detailed, featuring every common element of work that the Contractor and CDE performs to fulfill the requirements of an assessment projects. The WBS and/or the CoAlt Program Deliverables and Obligations shall be carefully managed throughout the project to keep track of schedule elements. All Contractor team members shall be required to submit weekly updates to the CoAlt project manager. Any variations in scheduled start dates or projected task durations shall be seen immediately by the CoAlt project manager and appropriate corrective action shall be initiated without delay.

The Contractor and CDE shall jointly monitor the schedule on an on-going basis. The Contractor shall ensure that all schedule adjustments requested by the Contractor allow for final deliverable dates to be met. If necessary, timelines and schedules may be revised with prior approval by CDE and by an executed contract amendment for all deliverables subject to liquidated damages. A revision of the Contractor's timeline shall exempt the Contractor from meeting a contractual deadline **only if** 1) the Contractor and CDE mutually agree upon and document through a contract amendment an extension of the deadline as

executed through a contract amendment or 2) the Contractor is able to prove that the deadline was not met due to CDE's failure to meet a contractual deadline resulting in the Contractor's inability to adhere to the schedule for delivery of products and services.

The Contractor shall alert CDE as soon as it believes that a deliverable subject to liquidated damages is at risk of not meeting its delivery date. CDE must be notified whenever the Colorado Contract is included in the Contractor's internal meetings focused on programs at-risk.

B.3.2. Program Management Communication and Reports.

B.3.2.a On-going Communication. The Contractor shall engage in on-going communication with CDE. Telephone calls, telephone conference calls, emails, overnight courier service, facsimile correspondence, and other communication procedures will be at the Contractor's expense. The Contractor shall provide toll-free numbers for telephone communication including conference calls and webinars.

B.3.2.b Timeliness of Communication. The program management team shall return calls from CDE staff and respond to email messages within 24 hours. If the program manager is not available to take calls and return messages, CDE shall be notified in advance. In the event that a member of the Program Management team is not available, the Contractor shall notify CDE as to whom to contact in his or her absence, and shall provide contact information for such individual. The program manager shall use multiple means to maintain constant and ongoing communications with CDE: email, cell phones, SFTP sites, faxes, conference calls, WebEx conferences, and other means that support the immediacy or urgency of the communications topic, as well as regularly scheduled communications meetings. The program manager shall be responsible for ensuring that the appropriate members of the Contractor's team are available for or participate in such communications. The program manager and the Contractor's program team shall maintain records of all meetings, minutes, or summaries, including those with subcontractors and make those available to CDE upon request.

CDE shall participate in meetings and trainings as appropriate or as required. To keep CDE fully informed, the Contractor shall use standard communication (phone and e-mail), direct access to the Contractor's leadership, and online access to calendars and schedules. These methods of communication will be employed to make decisions and provide information to various CDE constituencies. Executive level issues shall be immediately referred to Mr. Hill.

B.3.2.c Weekly Meetings. At a minimum, the Contractor shall schedule weekly conference calls and reports with CDE at a designated time. Program details shall be discussed, including requirements, the schedule, issues, and work updates. As the need arises, other periodic or on-going conference calls may be conducted. From each conference call, an updated issue log will be created noting a discussion summary, action items, information needed for program success, dependencies, and key dates from the schedule. The Contractor shall distribute this report to CDE and throughout its company. This report shall be submitted to CDE within two business days of the conclusion of each meeting.

B.3.2.d Project Meetings. The Contractor shall be responsible for the coordination, support, and expense of regular management meetings with CDE's assessment director(s) and team. For the contract period running through June 2014, the Contractor shall hold monthly planning or work sessions to confirm that all baseline and start-up details are being closely monitored and on-track. Four (4) of these meetings shall be hosted at the Contractor's facilities and the others shall be held in Denver, CO. The Contractor shall prepare draft agendas for CDE review and approval and shall verify that appropriate members of the Contractor's teams attend in person or are available via electronic meeting technologies.

For each of the remaining fiscal contract periods, through August 30, 2017, the Contractor shall meet with CDE every other month (six (6) times annually), with three (3) of these meetings in Denver and three (3) at the Contractor's facilities. The Contractor shall confirm appropriate attendance by pertinent team members. CDE shall be responsible for the costs for its staff to travel to the Contractor's location.

The Contractor's project management team shall collaborate with CDE to identify topics for each meeting. The Contractor shall provide a draft agenda for each meeting to CDE for review. The program manager shall work with the CDE to develop general formatting and content guidelines for the meeting agendas.

In addition to the in person meetings, the Contractor shall coordinate management meetings via WebEx or teleconferencing through a toll-free number. The Contractor shall be responsible for providing written documentation for all meetings with special attention given to deliberate decisions, actions required, and personnel needed for follow-up. This documentation shall be submitted to CDE within two days of the conclusion of each meeting.

The Contractor shall organize several additional meetings throughout the year. For all meetings—including, but not limited to management meetings, item reviews, alignment studies, range finding meetings, standard settings, and technical advisory groups—the Contractor shall take minutes and make a record of participants, including institutional affiliation and contact information. The Contractor shall provide all minutes, records, and lists of participants to CDE for review and approval within two working days after each meeting. The following figure shows more details about the Colorado Student Assessments face-to-face meetings.

Colorado Alternate Assessments Project Meetings					
	TAC Members	CDE Staff	Contractor Staff	Meetings Per Year	Number of Days
Technical Advisory Committee	1 (4 from summative)	2	2	3	2
Contract Kick off Meeting		2	8	1 total (Upon contract award)	2
Annual Planning Meeting		2	4	1	2
Planning/work sessions		2	4	12 (Fiscal Years 1 -2) Dependent upon contract extension:6 (Fiscal Years 3, 4, 5)	2
Quarterly Upper Management Project Meetings		2	1	4	1

Additional Contractor staff shall be available as necessary.

CDE shall be responsible for the costs for its staff to travel to the Contractor's location.

B.3.2.e Monthly Reports. The Contractor shall provide a monthly report to CDE. The monthly reports shall address important issues affecting the Colorado Alternate Assessments and provide the information that CDE needs to maintain close oversight. Each report shall include information on items such as the following:

- Unanticipated difficulties and proposed solutions
- Feedback from the CDE districts and schools
- Discussion of unresolved topics
- Decisions needed from the CDE
- Status of tasks in progress as compared to the baseline schedule
- Anticipation of key decisions and issues affecting those decisions
- Preparations for upcoming tasks/events
- Potential impact of specific actions

The monthly report shall also include a detailed list of invoices submitted for payment and a history of invoices previously submitted. These reports shall be sent monthly to CDE by the third business day of the following month.

B.3.2.f. District Assessment Coordinator (DAC) Academy. The program manager and her program coordinator for the CoAlt shall attend the annual DAC Academy. They will either travel to Denver prior to one of the in-state project meetings or will remain in Denver following the project meeting in order to be present.

B.3.2.g. District Assessment Coordinator (DAC) Management Meeting. The program manager, project manager and/or the program coordinator shall attend the two DAC management meetings each year. They will gather input from the DACs

regarding any suggestions for changes to administration procedures or practices. Any changes suggested by the DACs will require CDE approval before implementation.

B.3.2.h. Program Improvement Plans. The Contractor shall use feedback garnered from pre-test, mid-assessment, post-test workshops, the program review, educator meetings, and yearly performance evaluations to improve all aspects of the CoAlt. Based on feedback from Colorado educators, DACs, and CDE, the Contractor shall identify solutions for improvement via Post Phase Review meetings, provide a plan for improvement based on "lessons learned," at each planning meeting allow for time on the agenda to discuss CoAlt improvements, identify training needs based on feedback from educators and with guidance from CDE, and collaborate with CDE on technology capabilities.

For each phase of the program including development, production, shipping, and receipt, administration of paper-based assessments and online scoring, security scanning, data processing, reporting and psychometric activities, the Contractor shall provide a report that addresses the relevant phase by detailing the activities completed and by providing recommendations for improvement for the next assessment cycle. The report shall also detail errors, problems, and/or discrepancies by district and by school. The Contractor shall prepare a comprehensive report detailing the annual assessment cycle and providing recommendations for changes and improvements. This report shall incorporate feedback from a range of Colorado constituents, the TAC, and members of the Contractor's project teams, allowing CDE to fully analyze such recommendations before making decisions or adjustments. This report shall be completed within one month of completing the relevant phase. Final approved decisions will be incorporated into the next year's project plan and communicated to the full project team.

B.3.2.i. Quality Control and Sign-offs. Reviews and signoffs for all deliverables shall be documented and available to CDE upon request. The quality control plan shall be finalized in conjunction with CDE and will incorporate responsible entities, timelines, staff involved in the quality control procedures at each phase and deliverable of the project and CDE involvement in sign-off and approval at various stages.

B.3.2.j. Invoices. The fiscal year term for Colorado begins on July 1 and ends on June 30. The Contractor shall submit invoices according to the procedures and requirements set forth by CDE. The Program Management Plan will include invoice dates to reflect that, for each fiscal year, invoices are to be submitted quarterly, plus one final invoice. Invoices are to cover work, services, and deliverables provided during the period. Final invoices for each fiscal year shall be submitted by June 15 and the final invoice for each assessment cycle will be submitted by September 1 of each year.

B.3.3. Transition. The Contractor shall assist CDE with all activities required to transfer all assessment documents and materials during the two transition phases. The Contractor's staff will work with Colorado's current contractor to confirm that all existing Colorado assessment materials are transferred on time and that the materials retain their intended content and formatting. The Contractor shall perform a quality assurance check on material received from the existing contractor and shall notify CDE of any materials not delivered as expected.

The Contractor shall ensure that all relevant non-proprietary documents and materials, including but not limited to those identified in the following list are transferred efficiently among CDE, the current contractor, the Contractor and CDE's future contractor(s):

- Test development – all critical documents and materials used in the test development process;
- Item and test specifications – all item format details, test map requirements, test blueprints, and technical reports;
- Test books – all paper and electronic test booklets and electronic answer documents from previous test administrations; test maps for each form from the previous year's administration with keys and metadata;
- Passages and artwork – all photocopies of the original passages with source documentation, copies of contracts, original electronic art files and applicable permission information;
- Item bank, item and test statistics – all item-level metadata and previous usage statistics, available test-level statistics, previous anchor range finding papers, rubrics, constructed-response materials such as training material protocols, previous operational and field test usage of each item year and form item position status;
- Program administration – all critical documents and materials used with the test administration process;
- General program documentation – all critical documents and materials used for general program documentation and summary reports;
- Reports – sample copies of all reports provided to districts and schools;
- Manuals/guides – sample copies of all guides and manuals (hard copy and electronic versions) for the operational test administrations, and copies of all electronic materials posted on the state website during the operational test administration;
- Scoring information – all critical documents and materials used in the scoring process;
- Scoring/reporting specifications – all documentation regarding scoring rules, aggregation rules, roll-up algorithms, and tables used to calculate student, school, district, and state results;
- Psychometric and related assessment information required for the program – all critical documents and materials used for psychometric analyses and related procedures;
- Professional development – all critical documents and materials used for professional development;
- Equating data files – all documentation that outlines layouts for files including item statistics, master file, pre-id, school/district score data and state-level score data;
- Technical reports and other validity and reliability reports - electronic copies of all technical reports produced by the contractor and electronic copies of any other reports that discuss the validity or reliability of the assessments;
- Project plan – all documents that outline the tasks/deliverables and corresponding schedule for those tasks/deliverables;
- Schedules – all previous project schedules containing dates/durations for the following tasks:
  - Developing items, forms, and materials
  - Enrollment and pre-identification
  - Packaging and distribution
  - Receiving
  - Scoring and reporting
- Packaging specifications – all documentation concerning packaging algorithms and shipping points; and
- Print specifications – all spreadsheets detailing print specifications for test booklets, labels, envelopes, and manuals.

The Contractor shall assist CDE with all activities required to transfer all assessment documents and materials during the two transition phases. Draft Transition Plans shall include procedures for the transition of documents and materials related to the following:

- Program administration – The Contractor shall ensure that all critical documents and materials used with the test administration process are transferred efficiently between CDE and/or contractors.
- Test development – The Contractor shall ensure that all critical documents and materials used in the test development process are transferred efficiently between CDE and/or contractors.
- Scoring information – The Contractor shall ensure that all critical documents and materials used in the scoring process are transferred efficiently between CDE and/or contractors.
- Psychometric and related assessment information required for the program – The Contractor shall ensure that all critical documents and materials used for psychometric analyses and related procedures are transferred efficiently between CDE and/or contractors.
- General program documentation – The Contractor shall ensure that all critical documents and materials used for general program documentation and summary reports are transferred efficiently between CDE and/or contractors.
- Professional development – The Contractor shall ensure that all critical documents and materials used for professional development are transferred efficiently between CDE and/or contractors.

B.4. Assessment Development

B.4.1. Work Plan. The Contractor shall develop and present a work plan annually for approval by CDE. The Contractor shall adhere to the mutually agreed upon detailed schedule that outlines the tasks and durations for each year of the Contract. The draft schedule is included in Exhibit B. Colorado has determined that this Contract will cover the content areas of Science and Social Studies with the option of later adding the content areas of English Language Arts and Mathematics.

The Contractor and CDE shall collaborate at each major phase in the test development process to produce assessments that meet all test specifications and CDE expectations.

The Contractor shall conduct an internal audit for the CoAlt at least once during the Contract period to ensure that all aspects of their work meet professional standards and industry best practices.

B.4.2. Content.

B.4.2.a. Determining Eligible Content. The Contractor shall provide draft eligible content for the CoAlt. Eligible content shall be established from the Extended Evidence Outcomes (EEOs) of the Colorado Academic Standards. The Contractor shall outline which standards are assessable, prioritize standards, and suggest appropriate item formats for each assessable standard. The Contractor shall provide refined eligible content to be reviewed by the field and revised by CDE. The Contractor shall be responsible for providing a finalized document for CDE approval.

B.4.2.b. Claims and Reporting Categories. The Contractor shall include Colorado stakeholders conversation regarding the claims that CDE expects to be able to make based on its alternate assessments. This can be an abbreviated conversation; with the claims, where possible, parallel to the summative assessment.

Based on these claims, the Contractor and CDE shall collaborate in determination of reporting categories for each assessed subject, and sub-scores shall be considered. The Contractor shall be responsible for providing a finalized document for CDE approval.

B.4.2.c. Frameworks. The Contractor shall provide draft assessment frameworks. The Contractor shall provide refined frameworks to be reviewed by the field and revised by CDE. The Contractor shall be responsible for providing a finalized document for CDE approval.

It is CDE's intent to assess the breadth and depth of the standards each year to the extent possible given the restrictions of a state alternate assessment.

B.4.2.d. Development of Performance Level Descriptors. The Contractor shall develop draft general and grade level specific Performance Level Descriptors (PLDs) for the CoAlt for review by CDE. General descriptors shall demonstrate a progression of increasing knowledge, skills, and abilities appropriate for differentiation between performance levels. Grade level and content specific PLDs shall expand the general PLDs to identify specific knowledge, skills, and abilities specific to the content standards appropriate for each performance level. The PLDs shall also inform development of item specifications and future item writing and shall be used in the standards setting process to support the validity and defensibility of the entire assessment system. The PLDs shall also inform development of item specifications and future item writing and shall be used in the standards setting process to support the validity and defensibility of the entire assessment system.

The Contractor shall provide refined PLDs according to the following plan:

- Standard Setting will occur during the summer of 2014 for Science and Social Studies
- If CDE should choose to move forward with English Language Arts and Mathematics as part of this Contract, Standard Setting will occur during the summer of 2015 for English Language Arts and Mathematics
- Contractor Content Support Services (CSS) proposed PLD development plan
- Contractor's CSS will develop draft PLDs for CDE review
- CDE will review and provide feedback to the Contractor and CSS
- PLD review meeting to be held during Teacher Item and Bias Review Committee Meetings for Spring 2014 development
- Make updates to PLDs following Item and Bias review meeting
- Post on the web for district review by winter, January, 2013
- Teachers prepare for Spring 2013 Field Test and Spring 2014 Operational Test
- Finalize PLDs at Standard Setting the following year in the summer of 2014
- Five levels of PLDs should be used, patterned after PARCC for Summative. Alternate PLDs will be outlined with the following descriptions:

Alternate
Inconclusive
Exploring
Emerging
Developing
Novice

B.4.2.e. Item Types and Test Blueprints/Specifications. The assessment item types to be developed for the CoAlt are defined below:

- Selected-Response – These are items in which students are presented with several answer choices, one of which is correct. Students are asked to select the correct answer. Selected-response items should be designed to assess the highest level of content knowledge and cognitive complexity that can be appropriately measured through this type of item and is appropriate for the EEO.
- Supported Performance Tasks – These are items in which students manipulate objects, complete a chart/table, or provide a response to a question or a prompt. Supported performance tasks will follow a format of multiple-step selected response items. The items will allow for responses that can be provided in approximately five-ten minutes or less.
- Short Constructed-Response – These are items in which students write in a response to a question or a prompt. Student responses consist of 1) one to five letters, one to five words or one to five sentences, 2) written work in solving a Mathematics problem, 3) drawing, or 4) another response that can be provided in approximately five to ten minutes or less. Should CDE move forward with the development of English Language Arts and Mathematics assessments, short constructed response items will be included.

The Contractor shall create a proposed test blueprint for the CoAlt to be developed in each tested content area by grade level. The Contractor shall provide refined blueprints to be reviewed by the field, as appropriate, and revised by CDE. The Contractor shall be responsible for providing a finalized document for CDE approval. This blueprint shall specify the number of each type of assessment item to be used at each grade level in each content area, depth of knowledge, and the number of items in each eventual test form. (The Contractor shall take into consideration the fact that the alternate assessments must generate valid information throughout the data distribution, including both tails.)

Should CDE move forward with the option of later adding the content area of English Language Arts, the Contractor shall develop ELA assessments that include a combination of literary and informational passages. Literary texts include fiction, literary nonfiction, and poetry. Informational texts include

exposition, argumentation, persuasive texts, procedural texts, and documents. Final text distributions shall be approved by CDE.

The Contractor shall develop test specifications in collaboration with CDE. The test specifications shall include, at a minimum, 1) the definition of the content of the assessment; 2) the proposed number of items for the test; 3) the desired psychometric properties of the items and test; 4) the arrangement of items and components of the test; 5) the item type; 6) the evidence outcome; 7) the number of score points per reporting category; 8) item usage (such as field test, operational, and anchor); 9) the approximate time requirements for each assessment; 10) new development to compensate for refresh and release rates on forms; 11) the use of approved testing accommodations; 12) the content domain; and 13) other psychometric information.

B.4.2.f. Design. The Contractor shall develop a draft test design with which to assess the EEOs. The Contractor shall provide a refined design to be reviewed and revised by CDE. The Contractor's draft test design is below.

Colorado Alternate Assessment		Stand Alone Field Test					Operational Test									Embedded FT									
		Total Items per Form		# Forms	Total Items Field Tested		Operational Items per Form		Linking Items per Form (operational)		Possible Points per Item Type		Total Points Possible	% From SR Items	% From CR Items	SR Items per Form		CR Items per Form		Total Items per Form		# Forms	Total Items Field Tested	
Content	Grade	SR	CR		SR	CR	SR	CR	SR	CR	4 pt SR	6 pt CR				OP	FT	OP	FT	SR	CR		SR	CR
Science																									
Science	5	12	3	2	24	6	15	2	4-5	1	60	12	72	83%	17%	15	2	2	1	17	3	2	4	2
Science	8	19	3	2	38	6	24	2	6-7	1	96	12	108	89%	11%	24	3	2	1	27	3	2	6	2
Science	HS	19	4	2	38	8	23	3	6-7	1	92	18	110	84%	16%	23	3	3	1	26	4	2	6	2
Social Studies																									
Social Studies	4	12	3	2	24	6	15	2	4-5	1	60	12	72	83%	17%	15	2	2	1	17	3	2	4	2
Social Studies	7	12	3	2	24	6	15	2	4-5	1	60	12	72	83%	17%	15	2	2	1	17	3	2	4	2
Social Studies	HS	19	4	2	38	8	23	3	6-7	1	92	18	110	84%	16%	23	3	3	1	26	4	2	6	2

Colorado Alternate Assessment		Stand Alone Field Test					Operational Test									Embedded FT									
		Total Items per Form		# Forms	Total Items Field Tested		Operational Items per Form		Linking Items per Form (operational)		Possible Points per Item Type		Total Points Possible	% From SR Items	% From CR Items	SR Items per Form		CR Items per Form		Total Items per Form		# Forms	Total Items Field Tested	
Content	Grade	SR	CR		SR	CR	SR	CR	SR	CR	4 pt SR	6 pt CR				OP	FT	OP	FT	SR	CR		SR	CR
ELA																									
ELA	3	19	3	2	38	6	24	2	6-7	1	96	12	108	89%	11%	24	3	2	1	27	3	2	6	2
ELA	4	19	3	2	38	6	24	2	6-7	1	96	12	108	89%	11%	24	3	2	1	27	3	2	6	2
ELA	5	19	3	2	38	6	24	2	6-7	1	96	12	108	89%	11%	24	3	2	1	27	3	2	6	2
ELA	6	19	3	2	38	6	24	2	6-7	1	96	12	108	89%	11%	24	3	2	1	27	3	2	6	2
ELA	7	19	3	2	38	6	24	2	6-7	1	96	12	108	89%	11%	24	3	2	1	27	3	2	6	2
ELA	8	19	3	2	38	6	24	2	6-7	1	96	12	108	89%	11%	24	3	2	1	27	3	2	6	2
ELA	9	19	4	2	38	8	23	3	6-7	1	92	18	110	84%	16%	23	3	3	1	26	4	2	6	2
ELA	10	19	4	2	38	8	23	3	6-7	1	92	18	110	84%	16%	23	3	3	1	26	4	2	6	2
ELA	11	19	4	2	38	8	23	3	6-7	1	92	18	110	84%	16%	23	3	3	1	26	4	2	6	2
Mathematics																									
Math	3	19	3	2	38	6	24	2	6-7	1	96	12	108	89%	11%	24	3	2	1	27	3	2	6	2
Math	4	19	3	2	38	6	24	2	6-7	1	96	12	108	89%	11%	24	3	2	1	27	3	2	6	2
Math	5	19	3	2	38	6	24	2	6-7	1	96	12	108	89%	11%	24	3	2	1	27	3	2	6	2
Math	6	19	3	2	38	6	24	2	6-7	1	96	12	108	89%	11%	24	3	2	1	27	3	2	6	2
Math	7	19	3	2	38	6	24	2	6-7	1	96	12	108	89%	11%	24	3	2	1	27	3	2	6	2
Math	8	19	3	2	38	6	24	2	6-7	1	96	12	108	89%	11%	24	3	2	1	27	3	2	6	2
Math	9	19	4	2	38	8	23	3	6-7	1	92	18	110	84%	16%	23	3	3	1	26	4	2	6	2
Math	10	19	4	2	38	8	23	3	6-7	1	92	18	110	84%	16%	23	3	3	1	26	4	2	6	2
Math	11	19	4	2	38	8	23	3	6-7	1	92	18	110	84%	16%	23	3	3	1	26	4	2	6	2

B.4.3. Item Development. The items developed for the CoAlt assessment shall be custom-developed for Colorado. CDE shall own the items within the CoAlt bank. CDE is not seeking to use vendor-owned items.

B.4.3.a. Samples Items. The Contractor is responsible for providing sample items in Colorado SFY 2013 for each grade level and content area being assessed under the Contract. CDE will share the sample items provided by the Contractor with the public, so the items must be available for this purpose.

B.4.3.b. Item Specifications and Style Guides. The Contractor shall develop specifications for each type of item and artwork to be created for the CoAlt. The Contractor shall work with CDE to prepare a Colorado Style Guide that will be followed by the Contractor. On an annual basis, the Contractor shall work with CDE to review and revise the item and art specifications and the style guide to verify that they contain newly-introduced features or needed clarifications. The Contractor shall be responsible for providing updated copies of item and art specifications and style guides to CDE for approval.

B.4.3.c. Universal Design. The Contractor shall ensure that items will be created that will permit students with disabilities and English language learners (ELLs) to fully participate in the assessments and receive valid scores, while minimizing the need for accommodations.

The Contractor shall, at a minimum, incorporate the following steps:

- Examine items for evidence of disability bias and avoid such items;
- Use everyday words to convey meaning when vocabulary is not part of the tested construct;
- Establish text that is straight forward and concise;
- Reduce excessive text length and irrelevant material;
- Avoid complex sentence structure;
- Use clear, unambiguous words
- Minimize the use of italic typeface
- Use highly distinguishable symbols on graphics
- Provide art and illustrations that have clearly distinguishable features;
- Avoid using text on shaded backgrounds; and
- Use page-layout designs that are easy to read and follow.

B.4.3.d. Number of Items to be Developed. For each year, grade, content area and item type in the CoAlt, the Contractor will identify the number of items that will be developed to be taken to item review, the number expected to be accepted, the number expected to be included across the test forms during field testing and the number expected to be accepted at data review. The Contractor is required to provide enough items that pass data review to meet refresh and release requirements for each item type.

CoAlt Science and Social Studies Item Development Plan												
		Total Requirement				Total Development				Percent Overage vs. Required number of items		
	Grade	SR	SPT	Total		SR	SPT	Total		SR	SPT	Total
SCIENCE	**5**	41	10	50		52	14	66		130%	140%	**132%**
	8	63	10	72		81	14	95		131%	140%	**132%**
	11	62	17	79		81	22	103		131%	129%	**130%**
		164	**37**	**201**		**214**	**50**	**264**		**130%**	**135%**	**131%**
SOCIAL STUDIES	**4**	41	10	50		52	14	66		130%	140%	**132%**
	7	41	10	50		52	14	66		130%	140%	**132%**
	11	62	17	79		81	22	103		131%	129%	**130%**
		142	**37**	**179**		**185**	**50**	**235**		**130%**	**135%**	**131%**

CoAlt Optional English Language Arts and Math Item Development Plan												
READING/WRITING	**3**	56	9	64		72	13	85		129%	144%	**131%**
	4	56	9	64		72	13	85		129%	144%	**131%**
	5	56	9	64		72	13	85		129%	144%	**131%**
	6	56	9	64		72	13	85		129%	144%	**131%**
	7	56	9	64		72	13	85		129%	144%	**131%**
	8	56	9	64		72	13	85		129%	144%	**131%**
	9	55	15	70		72	19	91		131%	127%	**130%**
	10	55	15	70		72	19	91		131%	127%	**130%**
(Optional)	**11**	55	15	70		72	19	91		131%	127%	**130%**
		495	**99**	**594**		**648**	**135**	**783**		**129%**	**136%**	**131%**
MATH	**3**	56	9	64		72	13	85		129%	144%	**131%**
	4	56	9	64		72	13	85		129%	144%	**131%**
	5	56	9	64		72	13	85		129%	144%	**131%**
	6	56	9	64		72	13	85		129%	144%	**131%**
	7	56	9	64		72	13	85		129%	144%	**131%**
	8	56	9	64		72	13	85		129%	144%	**131%**
	9	55	15	70		72	19	91		131%	127%	**130%**
	10	55	15	70		72	19	91		131%	127%	**130%**
(Optional)	**11**	55	15	70		72	19	91		131%	127%	**130%**
		495	**99**	**594**		**648**	**135**	**783**		**129%**	**136%**	**131%**

CoAlt Optional English Language Arts and Math Item Development Plan												
TOTAL		**1296**	**272**	**1568**		**1695**	**370**	**2065**		**131%**	**136%**	**132%**

B.4.4. Electronic Item Development System and Item Bank.

B.4.4.a. Item Development System. Item development for the CoAlt shall be carried out using the Contractor's secure encrypted electronic item development system.

B.4.4.b. Item Bank. Assessment items shall be stored and retrieved from the Contractor's secure item bank.

Individual items shall have a unique identifier assigned. The Contractor's item bank shall store item alignments, answer keys/scoring rubrics, meta-data (grade, content, standard, difficulty), item text, item graphics, item type and data elements including position on form, administration date(s), classical statistics, IRT statistics and DIF statistics. The Contractor's item bank shall indicate the status of each item (e.g., not yet reviewed, content and sensitivity/bias reviewed, field tested, data reviewed, when used operationally along with standards, assessment objectives and item statistics), and permit the CoAlt forms to be readily assembled. The Contractor shall provide CDE with access to the item bank.

B.4.5. Development Process and Cycle.

B.4.5.a. Passage Selection. The Contractor shall select appropriate passages for all relevant content areas in the CoAlt based on complexity, quality, and range. The Contractor shall provide all needed passages for CoAlt. Passages for the CoAlt are expected to be three to five sentences. The Contractor will commission these "passages" or develop them internally.

The Contractor shall work with CDE staff to develop and refine guidelines for appropriate context content. CSS will create passage/stimuli specifications document for review and approval by CDE.

B.4.5.b. Passage Review. Should Colorado move forward with the option of later adding the content area of English Language Arts, the Contractor shall recruit five (5) diverse educators per grade span; both general education and special education teachers, to share their insights and observations about proposed assessment passages. The Contractor will present passages at the first Item Writer Training session of the cycle. Teachers will select passages for development and work on writing items for the remainder of the two-day meeting.

The Contractor shall prepare review material in close to final format, including art work, illustrations, photos, and graphics. The Contractor shall provide meeting facilitators who will record committee comments, committee recommendations, and committee judgments. Following the review meeting, the Contractor shall share results with CDE. The Contractor shall implement all edits with authorizations of CDE. The Contractor shall be responsible for providing finalized copies of passages to CDE for approval. Passages for the CoAlt will be presented with associated item(s). CDE will review as part of the item development process and receive final copy prior to the content/bias review meeting.

B.4.5.c. Item Development Meetings (Educator Meeting). The Contractor shall recruit, evaluate, and retain educators to serve in the role of item writers. To the maximum extent possible, selected-response, supported performance tasks and

short constructed-response items for the CoAlt shall be created by Colorado teachers (special educators who work with students with significant cognitive impairments, content area specialists and general education classroom teachers). For each content area and grade span (elementary, middle and high school), in year 1, a minimum of one (1) teacher experienced in educating special needs students and one (1) content specialists for science and social studies shall participate. For each content area and grade span (elementary, middle and high school), in year 2, a minimum of two (2) teacher experienced in educating special needs students and two (2) content specialists for science and social studies shall participate. For each content area, one of the educators must also have English learner expertise. The Contractor shall provide considerable training and guidance to these educators. In addition to the other expenses related to all educator meetings, the Contractor shall be responsible for providing each educator with a stipend of a minimum of $30 per accepted and usable item written. The Contractor will track items written by Colorado teachers throughout the development process. Payment will be provided to teachers for items noted as "accepted" or "accepted with minor revisions" at Item and Bias Review meetings.

Item writing workshops shall be in person and held in the Denver area. The Contractor shall be responsible for all meeting arrangements and payments, including meeting space; audio visual equipment, including laptops for use by the item writers as appropriate; multiple Internet connections for use by the item writers; meals, lodging and travel.

Workshops shall include an introductory presentation and training, material, opportunities to write items, and immediate and ongoing feedback to workshop participants. The Contractor's assessment specialists shall facilitate small groups with collaboration among participants while implementing the writing process.

The Contractor shall create item writing training materials to be used for review by CDE at least two weeks prior to the item writing workshop. The training shall assist item developers in understanding Universal Design principles, so that the need for extensive assessment accommodations for students with disabilities and English language learners is minimized. The CoAlt development training materials shall include items such as 1) A general PowerPoint presentation addressing the fundamentals of item writing common to all content areas; 2) Content specific PowerPoint presentations addressing issues particular to those content areas; 3) The Colorado Academic standards with extended evidence outcomes; 4) item development plans for each assessed grade in each content area; 5) *Children Writer Word Book*; 6) Everyday language; and 7) Templates. In addition, the language load of assessment materials must be carefully considered for all students for the academic assessments in Mathematics, Science, and Social Studies. CDE shall review and approve these materials and procedures before these materials are used.

The Contractor shall inventory the items developed by Colorado educators and shall be responsible to provide enough items for the CoAlt should the educators be unable to produce enough items in the available time. The Contractor must plan on being responsible for the majority of the item writing work, particularly in the initial Contract year as the field becomes accustomed to the new EEOs.

B.4.5.d. Item Revision and Supplementation.

Once items are accepted from a developer, the Contractor shall further review and revise the items, as needed, to meet CDE's expectations. The Contractor's process for review includes three internal content reviews, an internal editorial review, and an internal bias and sensitivity review. Throughout this multi-step item review process, the Contractor's assessment specialists shall continuously evaluate the match of the items to the standards, the appropriateness of the items to the population being assessed, the importance of the information being assessed, the implications for instruction, review and edit each item for technical quality, as well as conformity with Colorado Test Item Specifications and the Colorado Style Guide. If an item is unrelated to the content standards, is developmentally inappropriate, measures trivial information, or provides inappropriate models for instruction, the Contractor shall revise or eliminate it.

The Contractor shall have three levels of internal reviews of items: assessment specialist review, content area specialist review, senior-level content staff review. The Contractor shall use the following guidelines for these reviews:

- Match of each item to the identified standard, grade level equivalent and EEO
- Match of each item to the principles of high- quality item development
- Accuracy of the content of the item
- Difficulty of the item
- Adherence to the principles of universal design
- Relevance of each item as the item relates to the purpose of the test
- Readability of the item
- Appropriateness of any artwork, graphs, figures, etc.

During the first year of development, Colorado educators shall develop approximately 25 percent of the items and the Contractor shall use trained outside item writers to develop the remaining 75 percent of the items. Should Colorado educators be unable to develop this percentage of usable items, the Contractor shall assume responsibility for remaining item development. The Contractor's item writers shall have demonstrated expertise in item writing in the contracted content areas and grade spans. The Contractor shall train these item writers on the specific Colorado Assessment Standards, including the EEOs; Colorado item styles; and general item specifications. In the second year of development, the development responsibilities shall shift toward Colorado teachers developing approximately 90 percent of the items and outside item writers developing the remaining 10 percent of the items.

Ultimately, the Contractor is responsible for the development of the needed number of items for each content area and grade level so that post item review, field testing and data review, there are sufficient items to build each year's operational assessment.

B.4.5.e. Content and Bias/Sensitivity Review (Educator Meeting). All alternate assessment items are to be reviewed upon the completion of item editing. The Contractor shall provide internal content review to ensure that all CoAlt items align to the identified standard; adhere to the principles of Universal Design; ensure the accuracy of the content; ensure appropriate difficulty of the item for the target population; readability of the item; relevance to the purpose of the

assessment; match the principles of high-quality item development; and, appropriateness of artwork, graphs, figures, etc.

After the Contractor's internal review, each item shall undergo a CDE review followed by field review of the items and associated scoring rubrics. Each item shall be reviewed by a Content and Bias/Sensitivity Review Committee in each content area to assure that the item is of high quality, that it is aligned with a skill in the EEOs for that content area, that it measures the skill in a sound manner, that the item does not unfairly advantage/disadvantage any student, and that it is not offensive to students, parents, or the public. This committee shall also review the overall content coverage of the set of items, noting any areas where the alignment of the set of assessment items is weak. Each committee shall review each batch of items prior to stand-alone field testing as well as prior to embedded field testing of the items.

Content and bias/sensitivity review meetings shall be conducted in two (2) days. For each content area and grade span (elementary, middle and high school), a minimum of two (2) teachers experienced in educating special needs students and three (3) content specialists for each subject area shall participate. Based on scheduling, teachers experienced in educating special needs students can likely participate in multiple categories; however, content specialists will only be able to participate in one category. During the initial development, it is expected that these meetings may take an additional day. These meetings shall occur in person at meetings held in Denver, CO. The Contractor shall be responsible for providing CDE with the number of items accepted as is, the number of items accepted with major revisions, accepted with minor revisions and the number of items rejected.

The Contractor shall take the lead role in training the educators and facilitating each one of the Item Review Committees IRCs. The Contractor shall prepare all materials for these meetings. Items shall be in as close to final formatting as possible, including passages, artwork, illustrations, photos, and graphics. The Contractor shall also provide any needed ancillary materials in hard copy. All materials and the meeting agenda shall be reviewed by CDE at least one week prior to the meeting to allow time for revisions to be made prior to printing.

Content and Bias/Sensitivity Review meetings shall be conducted annually for all newly-developed Colorado items. The Contractor's facilitator shall record all committee input in master item books, with a location to mark the committee's judgment. At the conclusion of each meeting, the Contractor shall compile and share results from the meetings with CDE. The issues noted by each review committee shall be corrected by the Contractor or the item(s) should be deleted from the pool of items.

The Contractor shall be responsible for all costs associated with this educator meeting.

B.4.5.f. Field Testing (Initial and Embedded). All newly created items for the CoAlt shall be formally field tested.

For the first year of the Contract, field testing shall be conducted as a stand-alone activity. The Contractor's assessment specialists shall assemble field test sets of items so that they comprise the appropriate distribution of standards, item types, topic coverage, and item difficulty. Selected items will come from

approved new development. Proposed field-test items will be presented to CDE for approval in item card format for ease of item selection. Field-test items must be carefully assessed to avoid clueing. After approval by CDE, the Contractor shall assemble field-test items into standalone field test forms. The Contractor shall indicate the number of forms needed in Science and Social Studies. Field test item counts, field test administration years, and forms for each administration are outlined in the Test Designs documents found in B.4.2.f.

In subsequent years, field testing shall be embedded. The Contractor's assessment specialists will assemble field test sets of items so that they comprise the appropriate distribution of standards, item types, topic coverage, item difficulty, and cognitive levels. Selected items will usually come from approved new development, but may be selected from the item bank if it contains items that still require field testing or re-field testing. Proposed field-test items will be presented to CDE for approval in item card format for ease of item selection. Field-test items must be carefully assessed in relation to the operational form to avoid clueing between field-test and operational items. After approval by CDE, the Contractor will embed field-test items into approved field-test item positions of the operational form in composed test. While there will be only one Core operational form, the use of embedded field testing may result in multiple forms used during each administration, differing only in the field test items of each. After approval by CDE, the Contractor shall embed field-test items into approved field-test item positions of the operational form in composed test forms. Two embedded field test forms may be administered per subject and grade for CoAlt Field Test administrations. Test Design requirements are outlined in B.4.2.f.

B.4.5.g. Data Review (Educator Meeting). After the completion of field testing, the Contractor's assessment specialists shall work closely with the Contractor's psychometricians and with CDE staff to analyze the statistics associated with the items. After a thorough internal data review, a Data Review Committee consisting of educators from across Colorado shall review flagged field tested items. During these meetings, educators shall recommend which flagged items should not be used; which should be revised and re-field tested; and which should be used operationally, including justification for their use despite the flags.

These meetings shall take no more than one day for all content areas and will be held via WebEx. These reviews may be held in conjunction with the IRC meetings; however, educators should not be asked to be out of their classrooms for more than two days in a row. The Contractor shall describe how it will protect the confidentiality of the items before, during, and after the review meetings.

The Contractor shall take the lead role in training the educators and facilitating each one of the data review teams. All materials must be reviewed by CDE at least one week prior to the meeting to allow time for revisions to be made prior to printing.

The Contractor shall be responsible for all costs associated with educator meetings. The Contractor's plan of action and timeline describe how and when each of the training and support tasks will be accomplished. See Section B.9.1 for additional information.

B.4.6. Form Development. Once items have been accepted or rejected based on recommendations of the data review committees, the Contractor's assessment specialists and the Contractor's psychometricians shall select a meaningful set of operational and anchor items in accordance with the test blueprints and test construction specifications. Items selected for use operationally and as anchors will address a range and variety of skills with a variety of topics and contexts. The plan for the development of the forms must include consideration of the number of anchor items needed to equate the measures from year to year, the number of new operational items to be included, and the number and position of new items to be field tested. Maximum number of exposures for items must also be addressed. This plan will be formalized in the "Test Construction Specifications" document for review and approval by the CDE. Operational forms shall be approved by CDE prior to final production and use.

B.4.7. Accommodated Materials and Administration Procedures.

B.4.7.a. Accommodated Procedures. It is expected that within the standardized test administration procedures there will be adequate flexibility in presentation mode and response mode to allow students with a variety of communication, sensory and physical disabilities access the test. For use with the CoAlt, the Contractor shall provide a list of appropriate assessment accommodations for English learners. Accommodations listed must be supported by the most current research for this population. The list must describe the test accommodations and supports that allow access for students with disabilities to most fully participate in each assessment without interfering with the measurement of the constructs. The Contractor shall also discuss with CDE any accommodations which would threaten the validity of the alternate assessment by interfering with the constructs being measured.

B.4.7.b. Certification for District Translators. The Contractor shall institute a process for providing certification of district translators to ensure that valid translations are made. The Contractor shall develop a certification form and place that certification form online for district download and use. Local Educational Agencies will complete and maintain the forms.

In the event that the Contractor receives any inquiries or questions regarding such translations, the Program Team for the CoAlt, will notify CDE. She will indicate the source of the inquiry, the district referenced, and the nature of the inquiry (if such information is available). CDE will then be able to follow up with the district and determine any subsequent inquiry or actions.

B.4.8. Document Development.

B.4.8.a. District and School Assessment Coordinators Manual. The Contractor shall develop, and distribute the District and School Coordinators Manual for the CoAlt. The District and School Alternate Assessment Coordinators' Manual will provide an overview of the alternate assessment program, responsibilities of the DAC, responsibilities of the School Assessment Coordinator (SAC), directions on how to prepare for the alternate assessment, how to maintain materials securely, how to distribute and collect materials, how to receive and return materials, etc. The Contractor shall develop these manuals in collaboration with CDE, and they will be available via hard copy and online PDFs that allow text searching.

B.4.8.b. Examiners Manuals and Text. To help prepare school test administrators, the Contractor shall produce an Examiners Manual. The text from the manual will also be inserted in test books for each grade level of the assessment. The Contractor shall produce this manual according to CDE specifications. The Contractor and CDE shall collaborate to develop the Examiners Manual. These manuals shall be available in traditional hard copy at District Assessment Coordinator meetings and within the CoAlt test booklets. The Examiners Manuals will be available online via PearsonAccess™ and the CDE website as PDFs. The Examiners Manuals shall include changes to the CoAlt from the previous year, annual timeline of activities, security procedures, and specific assessment procedures. Instructions for the online system test examiners will use to upload scores will be provided in an electronic PearsonAccess™ User's guide.

B.4.8.c. Certification Forms. The Contractor shall outline the steps it will take to develop DAC, SAC and Examiner certification forms indicating that ethical standards, security procedures and standard assessment administration procedures were followed throughout the assessment process. Forms shall also include space to indicate deviations from any of those. The Contractor shall provide an efficient means to collect, document and store these certifications.

B.4.8.d. Test Booklets. The Contractor shall create the test booklets, which will include examiner directions, teacher-facing pages, student-facing test question or items pages for the CoAlt administrations. Test examiners will enter accommodations codes, test invalidation code, state use only, and district use only information directly within PearsonAccess™. Test materials shall include a score sheet upon which the test Examiners may record student scores and responses. Test examiners shall input the scores and relevant information into the online scoring submission tool from the individual student score sheet.

The teacher-facing pages will include teacher instructions, rubrics, and scripts. All components of the student-facing pages shall be produced in 18-point typeface. The books shall be bound so that both the student and the administrator have visual access to the information pertinent to the specific item. The student-facing pages will include items presented in portrait orientation, with one item per page. Electronic copies of the student items will be distributed to CDE-approved sites to meet Braille and accommodations requirements.

The Contractor shall create a proof of each test item after it has been typeset, formatted, and linked with any artwork. This proof shall have one item per page in a PDF format. CDE shall review the page proof and make any necessary edits or comments. The Contractor's content and editorial staff shall apply the requested changes and send them to the designers, who shall implement the changes. This review and proofing cycle shall repeat until the document receives a clean designation and is approved by CDE. After the forms are approved, they will move to the digital proof stage. The Contractor's team for the CoAlt shall verify that the content and the format of the digital proofs match CDE approved version. When the digital proof is approved by CDE, the Contractor shall print the document. Finally, the Contractor's editors will collect print samples and compare them with the CDE page proof to verify quality control procedures and confirm that any requested revisions were made.

B.4.8.e. Ancillary Materials. The Contractor shall be responsible for procurement and distribution of all Supported Performance Task (SPT) cardstock manipulatives and student answer choices cardstock manipulatives needed for the CoAlt, not found in a typical classroom. Upon completion of the assessment administration, the manipulatives will be inserted in to a security bar-coded envelope and returned to the Contractor with secure CoAlt materials.

Secure CoAlt materials will be wrapped in single packs with the following:

- Secure bar-coded test booklets
- Supported Performance Task cardstock manipulatives
- Secure bar-coded envelope for manipulatives

B.4.8.f. Sample/Released Items. Annually, the Contractor's content specialists shall recommend items of each item type in each content area and grade that will be provided to the public as representative of the assessments' cognitive complexity and content coverage. CDE staff will review the recommendations and make final decisions about which items are to be released on the CDE website. The Contractor shall collaborate with CDE to prepare answer key documents and scoring guides that will provide teachers with the correct answers, scoring rubrics, standards assessed, and item statistics. The items shall be presented in such a way that they will be easily downloadable for use in the classroom.

B.5. Assessment Administration

B.5.1. Work Plan. The Contractor shall adhere to the mutually agreed upon detailed schedule that outlines the tasks and durations for each year of the Contract. The draft schedule is included in Exhibit B.

In each year of the Contract, student, school, and district data shall be loaded into the PearsonAccess™ system. Test materials shall be shipped to arrive in districts two weeks before administration. Teachers shall be able to operationally assess their students and enter their observations within PearsonAccess™. Monitors shall observe and provide check scores for a sample of the administration. At the end of the administration window the Contractor shall provide transportation for the assessment materials to be processed.

B.5.2 Test Window. The CoAlt assessment window shall be according to the following schedules for 2013 and 2014.

2013 Assessment Administration	Start Date	End date
Science and Social Studies Field Test Administration	4/22/2013	5/3/2013

2014 Assessment	Start Date	End date
ELA and Mathematics Field Test (subject to inclusion of ELA and Mathematics to the Contract)	3/31/2014 (tentative)	4/11/2014 (tentative)
Science and Social Studies Operational Administration	4/14/2014 (tentative)	5/2/2014 (tentative)

The specific test windows for 2014, 2015, 2016, and 2017 shall be determined with input from CDE. Testing shall be completed no later than the second Friday in May.

B.5.3. Materials Ordering.

B.5.3.a. Pre-ID/Registration File. The Contractor shall provide a single data source for uploading and managing student Pre-ID information for the CoAlt. The Contractor shall work with CDE to transfer the layout of the current student Pre-ID file so that the existing group and test assignment structure is maintained for users already familiar with the Colorado's established procedures.

B.5.3.b. Materials Ordering System. The Contractor shall use PearsonAccess™ as an online electronic ordering system for DACs to use for the CoAlt. The system shall pre-populate using the Pre-ID/Registration file provided by CDE. The system will allow DACs to adjust their total student numbers and materials orders.

The Contractor shall confirm district/school orders for materials using a web-based verification system. The Contractor shall ensure that each district's order size is reasonable when it is submitted. The Contractor shall contact any districts requesting an unusual order before materials are shipped.

B.5.3.c. Online Roster. The Pre-ID/Registration file will also be used to generate the initial roster for the inclusion in the online score submission system. The Contractor's system, PearsonAccess™, shall allow for roster creation, district verification, and roster additions and deletions.

B.5.3.d. Additional Materials Ordering. Last minute shortages of assessment materials shall be handled quickly and efficiently by the Contractor as specified in procedures mutually agreed upon by the Contractor and CDE. The Contractor's system, PearsonAccess™, shall allow DACs to order extra testing materials for the CoAlt, even after the final enrollment numbers have been entered. This system shall allow DACs to check the status of their orders at every step in the process.

In addition, the Contractor shall be responsible for providing a list of which districts submitted additional orders, what they ordered, and whether they had participated in the original materials ordering window(s).

B.5.4. Document Production.

B.5.4.a. Examiners Manuals and Text. To help prepare school test administrators, the Contractor shall produce an Examiners Manuals and text for each grade level of the assessment. See B.4.8.b. Once the Contractor has developed the manuals and CDE has approved them, the documents shall be released for posting and printing in the CoAlt Test Book. The Contractor shall distribute copies of this manual at the test administration workshops held approximately one month prior to test administration.

B.5.4.b. Combined Teacher Instructions/Student Test Booklets. The Contractor shall produce test booklets that contain the Test Examiner requirements, teacher instructions, removable score sheets, and test items for each content area and grade level. See 4.8.d. Braille and enlarged print student materials will be produced by local districts and shall not be the responsibility of the Contractor.

The Contractor shall provide the student facing pages in electronic format for districts to produce these adapted materials.

B.5.4.c. Ancillary Materials. The Contractor shall be responsible for procurement and distribution of all ancillaries or manipulative materials needed for the CoAlt, not found in a typical classroom. See 4.8.e.

B.5.5. Secure Distribution, Collection, Storage and Destruction.

B.5.5.a. Packaging. Materials will be packaged according to district and school and sent to the DACs. The Contractor shall provide pallet maps to indicate where DACs may find the materials ordered. The Contractor shall use its security protocols during pre-packaging and assembly. The Contractor shall ensure accuracy of all orders and will meet schedules with on-time shipping. The Contractor shall track all CoAlt materials as they progress through the packaging system and through final shipment to districts. The Contractor shall use its software and barcode-scanning process controls to assist with quick and secure receipt of CoAlt testing materials and accurate distribution to individual districts and schools in Colorado.

B.5.5.b. Distribution and Collection. The Contractor shall be responsible for the distribution and collection of testing materials for the CoAlt, including outgoing and incoming assessment materials, as well as hard copies of reports. Secure bonded freight carriers and/or courier services will be used for distribution and collection. Delivery and collection activities must conform to a rigid date/time schedule set by CDE.

When shipping the district's test materials requires more than one box, the Contractor shall indicate the actual number of boxes that have been sent (e.g., Box 1 of 10, etc.). The Contractor shall use a brightly colored label on the outside of each box for operational administrations. This label shall include the wording "ATTENTION: District Assessment Coordinator" (or other district personnel as stipulated by CDE) to indicate that the enclosed materials should be brought to the immediate attention of the appropriate district personnel. The size of the label must be appropriately large.

Because shipments will contain secure and individually identifiable materials, all materials shall be shipped with signature required for delivery. Verification of receipt of 100% of the shipments is required.

Once the Contractor has assembled CoAlt materials, the Contractor shall box, label, number, seal, and process them for shipping. The Contractor shall be responsible for complete shipment accountability from origin to destination to return. The Contractor has indicated that they will use UPS as their primary shipper.

To help Colorado district representatives easily check shipments for accuracy when they arrive, the Contractor shall include the following easy-to-read shipping reports:

Packing Lists and Pallet Detail Reports provide accurate information about the quantities of materials boxed and to what locations they were shipped

A Security Report lists each individual barcode number assigned to each site.

Colorado district representatives should complete the following steps after CoAlt materials arrive:

1. Verify the shipment
2. Confirm the inclusion of all secure materials
3. Check that barcode ranges correspond to the Security Report
4. Complete the report, note any discrepancies, sign it, and return it to the Contractor along with the test materials.
5. CDE shall provide shipping and contact information for each DAC.

B.5.5.c. Materials Storage and Destruction. The Contractor shall archive or retain non-scorable material for 6 months (180 days) after reporting. Upon expiration of the aforementioned time periods, the Contractor must request CDE permission to destroy the stored material before doing so. Electronic files shall be retained for the life of the Contract plus 12 months.

B.5.5.d. Disaster Recovery. The Contractor shall follow an industry-standard recovery approach that meets applicable CDE standards with a reasonable expectation that testing requirements can be successfully achieved. Contractor's approach to Disaster Recovery was included in the proposal.

B.5.5.e. Verification. Within five days of the date(s) that the Contractor is to receive returned materials from the spring assessment(s), the Contractor shall provide a written report to CDE of all districts that have not returned their materials (box level). Semi-weekly (twice per week) reports shall be provided with the addition of partial shipments and test booklet count discrepancies until all secure materials have been accounted for. Resolutions shall also be indicated. The Contractor shall be responsible for contacting districts to resolve these issues. A final security report recording that all secure materials have been accounted for shall be provided to CDE within one week of all materials being accounted for.

B.5.6. Test Monitoring.

B.5.6.a. Fidelity to Test Administration and Security Procedures. The Contractor shall provide Test Examiners with procedures for monitoring the secure administration of the test. Workshops and training shall include reinforcement of all security measures and why those measures are of value. The Contractor shall also include security verification forms for all district and school personnel who will be directly involved in handling test materials and/or administering the tests. Section B.8.7 provides details for conducting data forensics analyses for CDE.

The Contractor shall develop monitor checklists with CDE's review and approval. The monitors shall work closely with the Contractor's management team, noting testing processes and any irregularities, and providing results to develop reports that will be provided to CDE within the specified testing period. The Contractor shall assume all responsibility for costs for the monitors and preparation of the reports. Audit reports for each school shall be developed and should include the audit scope (numbers of test sessions/administrators observed, etc.). Audit results may include, but are not limited to, positive practices, nonconformities, and any areas for concern. In the event that a monitor reports a concern that could be interpreted as a breach of security, the Contractor shall immediately notify CDE and provide the monitor's report. Monitors shall not interrupt or interfere with the administration; they will simply notify the Contractor of what they have observed that may be

questionable. CDE shall conduct any follow-up investigation and determine any course of action.

In addition, the Contractor shall compile issues and questions brought to the attention of the Contractor by CDE, DACs, and others. This compilation should inform discussions regarding which procedures may need to be clarified or enhanced in future years.

The Contractor shall provide assistance and support to CDE in strengthening Colorado's overall security procedures. This may include confirming that state-of-the-art processes, policies, and materials are being employed for the new state assessments.

B.5.6.b. Reported Violations of Administration and Security Procedures. In Colorado, DACs are expected to report violations of administration and security procedures to CDE. Should a DAC contact the Contractor, the Contractor shall redirect the DAC to CDE and verify with CDE that the issue was appropriately reported.

B.6. Scoring.

B.6.1. Work Plan. The Contractor shall provide a plan for the scoring of the tests. This plan must describe each step in the scoring process and must be reflective of a mutually agreed-upon schedule for all scoring activities from start to finish for each assessment year. The work plan shall include annual training dates for Scoring Monitors before the testing window, and Understanding Assessment Results in late summer.

B.6.2. Scoring Guidance. The Contractor shall develop and maintain scoring guidance to maximize reliable scoring on the part of the Test Examiners. CDE will review and approve any changes to the scoring guidance, including scoring rubrics and/or the scoring rules contained in it before they are utilized in the scoring of alternate assessment operational assessments. The scoring guidance developed and used for scoring of released items will be made available to classroom teachers each September for teacher use in "scoring" the work of their students.

B.6.3. Scoring Processes.

B.6.3.a. Resolution of Student, School and District Data During Scoring. The Contractor shall collaborate with CDE to resolve discrepancies among student, school, and district data. Colorado has a unique student identifier system in place that will be used for resolution of student data.

The Contractor's online portal shall enable district personnel to make and verify student demographic record corrections in real time, and to receive alerts about questionable information. The portal shall also alert users to possible key entry or transcriptions errors when they occur.

B.6.3.b. Teacher Scoring. The Contractor shall collaborate with CDE staff and Colorado educators to develop a robust scoring system for the CoAlt. The scoring system shall provide the flexibility necessary for assessing students with significant cognitive disabilities, while providing sufficient structure to establish reliable test scores. The Contractor's alternate assessment specialists, psychometricians shall participate in the development of the scoring system as appropriate.

The testing protocols shall be developed for standardization of teacher scoring. Mandatory teacher training sessions shall be conducted via WebEx with a

Contractor's facilitator. Training materials shall be developed by the Contractor, with review and feedback from CDE staff until the documents are approved for publishing. The teacher scoring training documents include: the examiner's eligibility requirements, all necessary instructions for preparation for the assessments, all directions for administration of the CoAlt, and complete instructions for scoring. Trainings shall allocate time for addressing questions and concerns from teachers and district personnel.

B.6.3.c. Scoring Monitors. For operational administrations of the CoAlt, the Contractor shall recruit, train, and assign eight (8) scoring monitors to provide secondary scoring throughout the State. All scoring monitors shall have sufficient knowledge of the alternate assessment content, administration, and student population to serve as validation experts and meet all of the pre-determined criteria that define them as experts in the evaluation of the alternate assessment testing population. The criteria used for selecting the scoring monitors shall be that they: 1) have more than 5 years of experience as a certified teacher; 2) are familiar with the alternate assessment population, 3) are subject matter experts regarding alternate assessment test designs and alternate assessment rubrics, and 4) represent different regional locations to get an adequate distribution across the State. The sampling plan shall provide an adequate number of expert scores from a representative sample of the alternately assessed students to be able to generalize results to the larger alternately assessed population.

The Contractor shall provide a training program for the scoring monitors to prepare them to be consistent in their approach and scoring for the expert-scoring task. In preparation for the training, scoring monitors will be asked to review the alternate assessment manuals, scoring rubrics, score procedures, and alternate assessment sample items. Group training for the eight (8) scoring monitors will be conducted by the Contractor and CDE staff via WebEx, including review and group discussion of the test materials, test administration, and the monitor protocol. In addition, the Contractor shall present videos of students being scored to the group of monitors. The scoring monitors shall provide an expert score for students' performance using the same materials and protocol as the teacher giving the first (primary) score for the student assessment for purposes of establishing reliability of the scoring rubrics. The resulting scores will have no impact on final student scores. Presentations will be posted to PearsonAccess™ following training events. Student videos will only be used during live training events; videos and references to specific students will be extracted from training presentations posted to PearsonAccess™. Expert scores shall be collected annually during the alternate assessment operational test window. The Contractor shall compare the expert scores to the operational test scores for students in the sample to establish inter-rater agreement statistics, preferably by grade and content area. CDE shall be notified of any test examiner who appears to not be conforming to expected scoring protocols and standards.

The Contractor shall be responsible for providing stipends or substitute reimbursement for the monitors, as well as reimbursing for mileage and relevant meals.

B.6.3.d. Online Score Submission System. The Contractor shall provide an online score submission system for use for the CoAlt. The Contractor's web-based scoring tool, PearsonAccess™, shall provide for score collection, status reporting, and assessment tracking/management services. Student demographic data shall be

loaded prior to testing, and the scoring tool shall allow student information to be entered up to the time of scoring. The scoring tool shall include fields or drop-down menus to enter additional data related to the testing experience, the student's typical performance, and accommodations. Additionally, the scoring tool will indicate the time the scores were submitted. CDE retains the right to determine if there are times when scores cannot be input for valid scores such as weekends, after 5:00 pm or after the testing window is closed.

The scoring data, including that entered by scoring monitors, shall be stored in a single repository with student, teacher, and school data.

B.7. Reporting of Data Files and Assessment Results

B.7.1. Work Plan. The Contractor shall adhere to the mutually agreed upon detailed schedule that outlines the tasks and durations for each year of the Contract. The draft schedule is included in Exhibit B.

Colorado shall use the Contractor's tools for collecting CoAlt assessment scoring and reporting specifications. The Contractor shall ask CDE a series of questions to establish a baseline for data requirements and preferences. The process of defining detailed Colorado requirements will clarify information such as that in the following table. This list is not exhaustive.

Reporting Requirements	
Requirement Categories	**Description**
General Expectations	
Report Types	Descriptions, purposes, and narrative explanations
Performance Content	Alignment to state objectives and grade level
Federal Requirements	Demographic summary reporting content
Timelines	Scheduling expectations, including scoring and reporting milestones
Business Rules	
Data groups	Attemptedness, suppression, and exclusion
Formatting	Rules for data fields within each reporting format
Performance levels	Pass/fail designations and Identification of individual student strengths and weaknesses
Data Analyses	
Item Analyses	Summaries of performance data by test item across student reporting groups
Presentation	
Report Appearance	Graphic display standards and alternate media
Report Mockups	CDE review of mockups for all student-results
Production & Distribution	
Report Production	Printing, pagination, sorting, and collation
Report Delivery	Recipients, packaging, and shipping

The Contractor shall work with CDE to confirm its understanding of Colorado expectations. The Contractor shall reference this record of CDE requirements and preferences throughout the activities associated with delivering data analysis and results reporting.

B.7.2. Data. All raw student data shall be provided to CDE by the Contractor.

B.7.2.a. Data Integration. Applications provided by the Contractor shall be SLI-compatible, such that they integrate with the API. Web-based applications requiring complex navigation and non-web-based applications are not suitable for SLI portal integration. Additional API information is available at slcedu.org.

The Contractor shall work with CDE to define a final version of the required SLI integration prior to implementation. Data shall be exported to one or more of the data exchange formats defined by the SLI Bulk Data Ingestion and Validation layer. These formats include the following:

- Standardized XML (Ed-Fi Interchange Format)
- Comma Separated Values (CSV) Format
- Schools Interoperability Framework (SIF)

B.7.2.b. Data Files. The deadline for posting the initial individual student level file for the districts is no later than the first Friday in June, after the initial operational administration and standard setting schedule. The exact content, naming conventions, definitions of data elements, and file type shall be clearly documented and agreed upon by the Contractor and CDE at least three (3) months prior to test administration.

The Contractor shall provide full state data files to CDE. The Contractor shall maintain the proper identification of each student and the accurate matching of the student to the test results using the identification number for each student. The data file shall contain all information gathered on each student during the test administration and scoring period including but not limited to the following:

- School and district name and identification number assigned by CDE designating where the student was tested;
- Individual item scores; and
- All raw and derived data

The state data file shall be transmitted to CDE. The exact content, naming conventions, definitions of data elements, and file type shall be clearly documented and agreed upon by the Contractor and CDE at least three (3) months prior to test administration.

Before generating final-results data files, the Contractor shall present a detailed data map for Colorado review and institute intermediate CDE approval milestones throughout the reporting process.

At a minimum, the state file shall include all elements that have been used in reporting. The Contractor shall provide PDF version of the state file to CDE.

B.7.2.c. Data Documentation. The Contractor shall develop reports that provide information in a form most useful to recipients. The Contractor shall follow these steps:

Step One: Proposal Requirements. The Contractor's writers, designers, and developers have thoroughly examined Colorado reporting requirements. The Contractor's technology and program teams also have met internally to discuss and determine CDE requirements for student and summary reports.

Step Two: Development of Report Mockups. When the Contractor's teams reach consensus and form a clear picture of CoAlt reports, the Contractor's designers shall begin to develop realistic mockups.

Step Three: Customer and Internal Requirements. The Contractor shall discuss CDE's precise reporting requirements for the CoAlt. To save valuable time and effort, the Contractor will assign a requirements analyst for the CoAlt. With Colorado's existing deliverables in hand, the analyst will re-examine the Contractor's recommendations and pre-fill the Contractor's customized documentation developed specifically for Colorado.

Step Four: Score and Report Planning Meetings. Early in the Contract cycle, the Contractor shall schedule an initial scoring and reporting meeting. During this face-to-face consultation between the Contractor and CDE, the Contractor shall verify both the prefilled documentation and the report mockups. The Contractor's requirements collecting job will not be completed until the Contractor has satisfied CDE by delineating the specified content, look, and direction for each final CoAlt report.

Step Five: CDE Confirms Requirements. The Contractor's program team, report designers, and technology developers shall continue to work with CDE to baseline this documentation in anticipation of future scoring, data analysis, and reporting activities.

Step Six: CDE Approval of Mockups. Colorado reports must be well constructed, graphically pleasing, easy to interpret, and accurate. The Contractor shall stay informed about recent reporting advancements, federal regulations, identified user preferences, and trends in effectively reporting student data nationwide, and inform Colorado when adjustments to the reports are warranted.

Step Seven: Reporting Requirements Completed. Colorado requirements documentation and mockups shall be used later during data testing, quality assurance evaluations, and production to validate that deliverables meet CDE educational measurement objectives.

B.7.2.d. Data Ownership. CDE shall own the raw and final data generated through the Contract. The Contractor is not allowed to utilize data generated through the CoAlt for its own purposes. Any usage of the data generated through activities related to this Contract may not be used for purposes outside of this Contract without prior written approval from the data owners.

CDE may choose to report the data in additional reporting layouts. Additionally, electronic images of the state level summary report by grade must be delivered to CDE. These images shall be in a format mutually agreed upon by the Contractor and CDE.

B.7.2.e. Student Biographical Data Review (SBD). After testing, districts shall be provided with the opportunity to review the demographic data generated from the electronic score submission system. The review process shall occur after all testing has been completed and scores have been submitted, but before all assessments final results are made available.

CDE shall have the option of using the Contractor's online portal, PearsonAccess™, to enable authorized staff to make and verify student

biographical data in real time. Should CDE elect to use the Contractor's solution, PearsonAccess™ shall be configured to incorporate a Colorado-supplied set of data requirements with input from the Educational Data Advisory Committee (EDAC), the Contractor, and Data Pipeline staff members.

B.7.3. Score Reporting.

B.7.3.a. Quality Control. The Contractor shall ensure that all data operations for the CoAlt are subject to multiple checks for accuracy before they are released.

During scoring and reporting for each test administration, the Contractor shall review and confirm that student results data are consistent with Colorado requirements. This quality assurance step will be conducted by the Contractor's testers; they must be detail-oriented, technically proficient, and follow documented best practices.

To confirm the quality of a data file, the Contractor's testers shall follow a process that includes, but is not limited to, the following:

1. Define all customer requirements and document all quality control procedures specific to the assessment program
2. Create a simulation (test deck) to verify that systems and algorithms are established according to client requirements
3. Check that all expected data fields and computed variables are in the file, populated, and represent valid and reasonable values
4. Should a value appear to be invalid, resolve or escalate the discrepancy according to resolution rules (These commonly apply to cases of blank fields, missing scores, out- of-range scores, and so on.)
5. Confirm that the number of students scored per test form, the number of schools, and district identifiers are consistent with expectations
6. Check data fields to confirm that content categories and attributes match requirements documentation
7. Confirm that data analyses comply with business decision rules
8. Verify that data analyses results are reasonable, accurate, and complete
9. Check that minimum/maximum score values, standard errors of measurement, performance score ranges, and weighted means of district or state scores match requirements documentation
10. Verify that values for raw scores, scaled scores, and score distributions are within expected ranges
11. Check samples of reports at every organizational and aggregate level

The Contractor shall develop and implement quality control procedures for checking the accuracy of all test information, all student scores and identification, and all summary data. The standard for the error rate of final data reports provided by the Contractor shall be zero (0.0). This excludes erroneous data that may have been provided by the school, district, or state.

The Contractor shall plan and prepare quality assurance (QA) schedules that will allow work to flow in a timely, effective manner while maintaining high quality deliverables. CDE shall review and approve the QA schedules annually.

The Contractor shall create detail logs that trace the application of QA procedures to the state score reports after each administration. The Contractor is responsible for maintaining quality products and services in all aspects of the assessment program component from initial development of training materials to the production of electronic data files and score reports.

B.7.3.b. Formatting of Reports. Assessment results for the CoAlt shall be reported in a "user friendly" format. The reporting system shall be designed to complement instruction and to facilitate the use of assessment results to improve student achievement. Reports shall reflect areas of strength as well as areas that need to be targeted for instruction.

The Contractor shall utilize feedback from students, parents, administrators, and teachers on report shells and content when designing and creating the reporting system. The design and layout of reports shall be initiated in a timely manner so that CDE has sufficient time to review the reports and to provide feedback to the Contractor.

B.7.3.c. Individual Student Reports. Score reports shall fulfill the Federal reporting requirements of the Elementary and Secondary Education Act. Specifically, the reporting system shall meet the expectations outlined in current Peer Review requirements.

At a minimum, individual score reports shall summarize the student's performance in all content areas on which the student was assessed. This report shall include an overall transformed scale score, performance level, and performance level descriptor. Two (2) paper copies (one for the school's student permanent folder and one for the parent) and an electronic version of individual student score reports shall be prepared that summarize the student's performance. The reports must include an indication of measurement error, such as error band graphics; relevant comparative information such as a bar chart displaying student scale score, school scale score mean, and district scale score mean, and explanatory narrative on all reports where appropriate.

The Contractor shall develop report shells translated into Spanish with explanations.

B.7.3.d. State/District/School Reports. The Contractor shall prepare summary reports at the state, district, and school levels. The same data reported on the individual student report shall be aggregated for state/district/school reports. Additionally, state/district/school reports must provide disaggregated data by student population and trend data. Electronic reports must be generated that summarize the performance of the state/district/school on all components of the assessment taken and on any sub-domain or instructional objective sub-score. Exact content and format for each of the reports and files listed below will be further refined during the project. The Contractor shall be responsible for the following:

- State PDF reports of summary and disaggregated data by grade and content area
- State file of data used to populate the district summary and disaggregated reports by grade and content area
- State file of data used to populate the school summary and disaggregated reports by grade and content area
- District PDF reports of summary and disaggregated data by grade and content area
- District file of data used to populate the district summary and disaggregated reports by grade and content area
- District PDF reports of school level summary and disaggregated data
- District file of data used to populate the school level summary and disaggregated reports

- District file including PDFs of all individual student level reports
- School PDF reports of summary and disaggregated data by grade and content area
- School file of data used to populate the school summary and disaggregated reports by grade and content area
- School file including PDFs of all individual student level reports
- School file of all individual student level data

Should Colorado decide to use its own system for making student biographical data corrections rather than using PearsonAccess™, the Contractor shall support CDE during this process by providing student biographical data files prior to field review and by accepting corrected student biographical data files from CDE after field review.

B.7.3.e. Report Approval. After CDE has approved the report formats and the type of information that will be included on the reports, the Contractor shall prepare accurate printed examples of the reports using mock data. The Contractor shall submit the report mockups to CDE for approval before proceeding with creation of the final score reports. Additionally, the first district reports processed will be used as a validation trial run for approval.

Prior to the distribution of reports, the Contractor shall provide computer readable student level data files to CDE. Prior to the first transfer, the Contractor and CDE shall mutually agree upon the exact format of the data files. However, the Contractor shall plan for the first transfer to be a direct electronic transfer to an agreed-upon secure server via FTP to be followed with an acceptable computer readable media (DVD preferred). The computer readable data file will include an indicator that specifies whether the student's biographical information was obtained from a pre-ID.

B.7.3.f. Reporting Dates. The Contractor and CDE shall arrive at an agreeable timeframe for report delivery, keeping in mind CDE's requirement for having individual student results no later than the first Friday in June, after the initial operational administration and standard setting year.

B.7.3.g. Report Dissemination. The Contractor shall maintain security of all individual test results. Individual test information shall be made available only to CDE, authorized school district personnel, and other entities identified and authorized by CDE. The Contractor shall provide all of the score reports and files to school districts as early as possible. The two copies of the Student Score Report must be provided in a paper copy so that one copy can be distributed to parents and the other retained in the student's permanent folder. Paper copies of individual student reports shipped to school districts shall be packaged to allow districts to easily separate the reports and to distribute them to individual schools. CDE will provide a list of names, emails, and mailing addresses for each district's assessment coordinator.

Other reports shall be provided in electronic format to districts and schools, such as via a secure web site or by a CD delivered to districts by a secure carrier.

Additionally, Colorado educators and districts will have the ability to quickly view assessment results through PearsonAccess™. The PearsonAccess™ security module shall provide administrative user authentication and

authorization services. Colorado shall have control over certain administrative security features. Colorado shall have control over the persons allowed to access the system, what level of the system (state, district, school) each user can access (available levels will be configured to match the naming convention used by Colorado), and which administrative functions (enrollments, student data management, order tracking, viewing reports, etc.) each user is permitted to access based on their role. Available roles and their associated permissions shall be configured according to Colorado requirements.

Each authorized user of PearsonAccess™ shall be given a unique user name and password, and no secure area within the system can be accessed without proper authorization. Additionally, each user shall be authorized to access only certain data records within the system (as described above with respect to user levels and roles). When accessing the administrative system for the first time, the user must agree to a confidentiality statement (customized by Colorado) and change the randomly generated password. CDE shall be able to modify the permissions assigned to a user role at any time. Changes become effective immediately.

B.7.3.h. Reporting Errors. The Contractor shall immediately notify CDE when an error in reporting has been discovered. The Contractor and CDE shall develop a plan for correcting the error. The Contractor shall also provide a revised timeline for correcting the issues and re-creating affected reports. Should a reporting issue occur, the vice president and program manager shall notify CDE and shall draft a communication for notification for schools and districts.

B.7.3.i. Reprinting. CDE shall not be responsible for the fees associated with the reprinting of score reports if the reprinting is necessitated by the actions of the Contractor. CDE shall also not be responsible for fees associated with the reprinting of scores if the reprinting is requested by a district. If a district requests reprinting that is not necessitated by actions of the Contractor, the district shall be responsible for reprinting costs.

B.7.3.j. Assessment Interpretive Guide. Annually, the Contractor shall develop an Interpretive Guide to assist parents and teachers in interpreting assessment results from the CoAlt. This publication shall contain images of the various reports and an explanation of each type of report. It shall also include information about the tested content areas and a glossary of technical terms. The Contractor shall use its experience in developing interpretive materials to help stakeholders understand the components and terminology that accompany a state assessment program.

The Interpretive Guide shall be formatted in such a way that pertinent information can easily be copied at the school building for distribution to teachers or parents. The format shall have information that is specifically targeted to parents. This information shall start and end with page breaks so that a parent does not get a partial page with information before or after the page break that is out of context. Parent information pages and the teacher information pages shall each “stand alone.” The guide shall be designed with specific text, graphics, and related materials for the desired audience. CDE will approve all materials prior to publishing. The Contractor shall print and deliver this document to Colorado schools based on a scheduled determined jointly by CDE and Contractor.

The Contractor shall produce and deliver this publication to CDE in ADA-compliant PDF files to be posted on CDE's website. The Contractor shall work with CDE to verify that the interpretive guide file posted to the Colorado website meet Section 508 accessibility requirements.

The URL for the Interpretive Guide shall appear on all levels of reports.

B.8. Psychometric, Research, and Technical Activities

B.8.1. Work Plan.

The Contractor shall adhere to the mutually agreed upon detailed schedule that outlines the tasks and durations for each year of the Contract. The draft schedule is included in Exhibit B.

B.8.2. Field Testing.

B.8.2.a. Sampling Design. The Contractor recommends that the field test sampling plan selects a diverse representation of Colorado students from throughout the state. Schools from districts small and large and urban and rural will be represented in the sampling plan. Field test materials will be shipped directly to districts.

B.8.2.b. Psychometric Analysis of Field Test to Support Operational Assessment. Item data from the field test of the CoAlt shall include the appropriate statistics. The Contractor shall provide CDE with all appropriate test statistics and information including test information functions, differential test function information, and validity and reliability measures from the field test. The Contractor shall establish reliability across test examiners. The Contractor will use the Rasch IRT Partial Credit Model to calibrate and equate the CoAlt. This will be accomplished with Winsteps v3.73. The Rasch difficulty, step thresholds, infit, and outfit statistics will be reported in the technical manual and in other appropriate venues. Depending on the results of the field test analysis, non-responses will either be scored as a separate category with a score equal to zero, or will be collapsed into a single category along with incorrect responses.

The Contractor shall produce a report of recommendations for changes to the operational assessment based on field test results, including whether non-responses should receive the same scores as incorrect responses. The Contractor will also make recommendations for item weights in association with the decision about non-response scoring. The report shall include item development process revision recommendations, administration materials and process revision recommendations, and an analysis of anchor pools available for operational testing.

B.8.3. Operational Analysis. Item data from the operational assessment of the CoAlt must include appropriate IRT item and task parameters, bias sensitivity analysis, and fit based on the IRT model.

The Contractor shall provide the following item level statistics for each item used on the operational test—item mean score, and item score-test score correlation. The Contractor shall report the proportion of low, middle, and high scorers as well as the total proportion of all examinees that achieved each possible score point.

For all items that receive second check scores, the Contractor shall provide the following measures of inter-rater reliability—total n-count of examinees who received second scores, percent of perfect agreement, percent of adjacent scores, and percent of non-adjacent scores.

The Contractor shall screen items for DIF using the polytomous extensions to the Mantel Haenszel procedure. Groups of interest shall be determined in consultations with CDE and the Colorado TAC.

The Contractor shall provide IRT parameters and item-fit statistics for all items used operationally. With the Rasch model selected, the Contractor shall use WINSTEPS (Linacre, 2011) to calibrate the items using Joint Maximum Likelihood Estimation (JMLE) and to produce the raw score to scale score tables used for number correct scoring.

The Contractor shall produce a report of recommendations for changes to the future CoAlt based on operational assessment results. The report shall include item development process revision recommendations, administration materials and process revision recommendations, and an analysis of anchor pools available for future operational testing.

B.8.4. Scaling and Standard Setting.

B.8.4.a. Vertical Scale Design. The CoAlt for Science and Social Studies shall not be vertically scaled.

B.8.4.b. Scaling. The Contractor shall work with CDE, and the Colorado TAC, to implement a scaling procedure for the CoAlt that will result in scale scores. The Contractor shall establish model fit and individual score reliability for the selected scaling procedure.

B.8.4.c. Standard Setting (Educator Meeting). The Contractor shall use a standard setting process that uses empirical data to establish patterns of performance that correspond to achievement levels, such as Reasoned Judgment. Criteria for standard setting shall include student information from all of the assessment's item types. Procedures shall be approved by the Colorado TAC and CDE.

Standard setting panels shall include: K-12 educators, including those familiar with students with significant cognitive disabilities, as well as content experts; higher education educators; and representatives from the business community as appropriate. The Contractor shall use 8-10 member content specific panels which span 2-3 grade levels (for ELA and mathematics tests) or that address each of the elementary, middle, and high school level exams (for science and social studies) for standard setting. The Contractor shall be responsible for all costs associated with convening these panels for two to three day long meetings. These meetings will be scheduled to take place after the initial operational exams have been administered, scored, and all scaling analyses completed. They will also take place after the final cut scores for the summative assessment have been determined. The panelists will thus be making their decisions with feedback derived from the initial operational administration of the assessments.

After the conclusion of the standard settings, a subsequent panel will meet to review the cut scores and impacts for consistency within each subject across grades, across subjects within the CoAlt, and between the CoAlt and summative assessments. The composition of these panels is yet to be determined through

discussion with the CDE, but could be subsets of the panelists from the just concluded standard setting, a different set of panelists, community and state leaders, CDE leadership, or some other group identified by the CDE.

The Contractor shall continue to show validation in successive years (2015 and beyond) through the Reasoned Judgment method to determine the appropriateness of equated cut scores. The Contractor shall link 2015 and 2014 tests by matching the student score distributions between the two (2) years. The raw scores that produce a similar percent of students in each performance level will be located and identified as the linked cut scores. Standards validation meetings and/or processes may impact reporting timelines for fiscal year 2015 and beyond.

The Contractor shall conduct CoAlt standards validation through a similar procedure as other standard setting methods to validate the previously set cut scores. As in the original standard setting, panelists shall first review CoAlt assessment frameworks and the item content maps. Next, panelists shall review the current performance level descriptors and evaluate the reasonableness of the linked cut scores in the contents of the changes made to the assessment. Score patterns shall be discussed and evaluated. If appropriate the panel shall make recommendations for modified cut scores and rationales for these suggested changes. The Contractor shall prepare a report for CDE. The Contractor shall prepare suggested communications for the field regarding potentially changing cut scores. Final decisions for changes in cut scores are the purview of CDE.

B.8.5. Linking and Equating. The Contractor shall post-equate the CoAlt using the Rasch IRT model.

B.8.6. Plans for Establishing Technical Adequacy.

B.8.6.a. Peer Review Requirements. The Contractor shall conduct the studies necessary to meet all requirements of the U.S. Department of Education's (EDs) *Standards and Assessment Peer Review Guidance*. The Contractor shall assist CDE in all areas necessary for a successful Peer Review of the CoAlt.

B.8.6.b. Alignment Studies. The Contractor shall work with a third-party contractor for independently conducted alignment studies of the CoAlt to the EEOs of the Colorado Academic Standards. CDE will have final approval of the third-party performing the study. The Contractor shall have the contractual and payment responsibilities for seeing that the study itself is completed.

B.8.6.c. Technical Advisory Committee. For the CoAlt component, the Contractor shall fund one (1) Colorado TAC member with technical expertise in special needs populations and accommodations. In advance of scheduled TAC meetings, the Contractor shall provide clearly stated questions and supporting background materials in a timely fashion for review by CDE and the Colorado TAC prior to Colorado TAC meetings. The Contractor shall be responsible for taking minutes and distributing meeting summaries to CDE and the TAC member within two business days.

TAC meeting costs shall be reconcilable, such that CDE shall not be responsible for paying TAC costs to the Contractor for a meeting that does not occur, or if the TAC member in this Contract is unable to attend. The Contractor shall assume that three, two-day TAC meetings will be conducted each year in Denver, Colorado. As deemed necessary by CDE, additional TAC members and

meetings may be added at the same costing price. Any additional meetings shall be managed via a contract amendment.

The Contractor shall have two (2) representatives attend each meeting in person. Additional representative from the Contractor shall be available as needed upon prior request from CDE. With approval from CDE, the Contractor may opt for these additional personnel to participate via teleconference or via another distance communication technology.

The TAC member, for this assessment component, shall be given a $1,500 honorarium per day. He/she shall also be reimbursed for meals, mileage, or airfare, rental car or cab fees and lodging.

B.8.6.d. Technical Report. The Contractor shall complete the Technical report annually by August 15th following the end of the operational testing cycle. A formal technical report will not be produced for the initial standalone FT administration, but a summary of item level statistics will be completed. This summary may be incorporated into the following year's Technical report. The Contractor shall incorporate the following high level concepts to provide a thematic structure for the annual technical report centered on the establishment and explication of a solid validity framework:

- Description of the Target Student Population
- Test Design and Development
- Validity Framework and Argument
- Alignment
- Administration and Training and issues that arose during administration
- Accommodations and testing of students with special needs
- Core Beliefs and Guiding Philosophy of the CoAlt
- Summary of Test Administration Analyses
- Scoring and Reporting
- Security
- Reliability
- Validity
- Standard Setting
- Psychometric analyses (such as item analyses, DIF analyses, and fit statistics)
- IRT calibrations
- Equating and scaling
- Opportunity to learn data

Appendices shall include related materials such as administrative regulations, state standards, frequency/percentile distributions, summary tables providing data from technical analyses, state performance summaries by demographic group, and other pertinent information.

The Contractor shall deliver a Technical Report and Yearbook by August 15 of each operational administration year. An administration summary will be prepared for the standalone field test, but a formal technical report will not be prepared. This summary may be incorporated into the following year's Technical report. The Contractor's lead psychometrician shall facilitate the review of the annual Technical Report and Yearbook by CDE, CDE's

Verification Vendor, and the TAC before the Contractor produces the copy for publication.

The Contractor shall report detailed results of all test administrations, as well as full details of all development and research activities conducted within that time frame, including item development and review, form construction and review, field testing, equating, validity, comparability, DIF, and reliability studies, etc., and any other activities conducted in support of the Colorado Student Assessments since the last reporting period beginning with the first operational administration. Exact contents of the technical manual will be determined annually in collaboration with the TAC. The report must meet comply with the U.S. Department of Education's *Standards and Assessment Peer Review Guidance* (or similar document developed in the future).

B.8.7. Irregularity and Data Forensic Analysis. The Contractor shall institute the following statistical checks for the CoAlt:

- Year-to-year comparisons of changes in performance aggregated by school
- Analysis for schools where all students have a similar pattern of scores, indicating generation of scores without administration
- Review of abnormally consistent scores that could indicate generation of scores without administration
- Review of patterns that are at odds with the item level stats, e.g., a student who gets high scores on a couple of the most difficult items and low scores on a few of the easiest

The Contractor shall work with CDE and the Colorado TAC to examine the above and other possibilities for monitoring on an ongoing basis the performance of students and the scoring process in general throughout the course of the Contract to promote fairness and consistency throughout the assessment process.

B.9. Training and Support

B.9.1. Work Plan. The Contractor shall provide training and support for the CoAlt to Colorado educators as needed for this assessment component.

The Contractor's plan of action and timeline that describe how and when each of the training and support tasks will be accomplished is included in the Colorado Alternate Educator Meetings Figure below.

Colorado Alternate Educator Meetings							
Meeting Title		CDE Staff	Contractor Staff	Educators	Meetings per year	Number of Days	Face-to-Face or WebEx?
Assessment Administration Training		2	2	Minimum of 50 No more than 120	4	1	Face-to-Face in FY13-FY14 (WebEx in FY15+)
Understanding the Assessment Results Training		2	2	Minimum of 50 No more than 120	4	1	WebEx in FY15+
Materials Management Training		2	2	Up to 75	2	1	WebEx FY13+
PearsonAccess™ Scorer Training		2	2	Up to 150	4	1	WebEx FY13+
Passage Review (Reading only– if option is executed)		2	2	15	1	1	Face-to-Face FY14-FY16
Science and Social Studies Item Development Meetings		2	4	12	2	2	Face-to-Face FY13-FY17
English Language Arts and Math Item Development Meetings (if option is executed)		2	10	18	2	1-2	Face-to-Face FY13-FY17
Science and Social Studies Content and Bias/Sensitivity Review		2	4	24	1	2	Face-to-Face FY13-FY18
English Language Arts and Math Content and Bias/Sensitivity Review (if option is executed)		2	4	24	1	2	Face-to-Face FY14-FY18
Science and Social Studies Data Review		2	2	16	1	1	Face-to-Face in FY13; virtual FY14+
English Language Arts and Math Data Review (if option is executed)		2	2	30	1	1	Face-to-Face in FY14; virtual FY15+

Colorado Alternate Educator Meetings							
Meeting Title		CDE Staff	Contractor Staff	Educators	Meetings per year	Number of Days	Face-to-Face or WebEx?
Science and Social Studies Standard Setting		3	9	30	1	3	Face-to-Face in FY14
English Language Arts and Math Standard Setting (if option is executed)		3	9	40	1	3	Face-to-Face in FY15

The Contractor's program team (including their technology consultant and psychometrician) shall develop draft training materials (hand-outs, PowerPoint slides, etc.) for CDE review, revision, and approval. The Contractor shall preview each training session and webinar for CDE staff at least two weeks prior to the scheduled training dates and make any necessary changes to the training materials before use. Training content and materials shall be approved by CDE before use. The Contractor shall adhere to the mutually agreed upon detailed schedule that outlines the tasks and durations for each year of the Contract. The draft schedule is included in Exhibit B.

The Contractor shall provide face-to-face and WebEx training to DACs and district trainers for the CoAlt. The above table indicates the training provision requirement for Year 1 and Year 2 of the assessment. For the first two years, CoAlt administration training will be conducted in a face-to-face environment. CDE will determine if the amount of training required may be reduced in subsequent years. At a minimum, subsequent years shall have one live WebEx for each of the two types of training.

For all face-to-face trainings the Contractor shall be responsible for all logistics and shall verify that facilities meet Americans with Disabilities Act (ADA) accessibility requirements. All trainings sessions will include oral and visual presentations and will incorporate interactive technology as appropriate. The Contractor shall ensure the provision of all training accommodations that are required by the ADA. All WebEx trainings will be archived and available for future use or reference.

B.9.2. CoAlt Administration Training. The Contractor shall develop face-to-face and WebEx trainings for the administration of the CoAlt assessments. These trainings sessions shall cover test administration procedures, an overview of the online system, how to handle the most common issues, managing testing security, and a thorough explanation, scoring demonstration videos, and hands-on practice of online score entry procedures.

The Contractor shall develop an additional WebEx training that shall focus on the logistics related to the CoAlt assessments, including the receipt of materials in the districts, the distribution of materials within the district, collecting materials for return to the Contractor, and the policies and procedures for maintaining security at all times.

Additionally, the Contractor shall develop a mandatory teacher scoring training session which will be conducted via WebEx with the Contractor's facilitator (see also section B.6.3.b).

The assessment manuals shall include the same types of information provided in these trainings which shall reinforce the training the DACs receive.

B.9.3. Understanding the CoAlt Results Training. The Contractor shall provide WebEx trainings for DACs and District Special Education Directors to support analyzing and understanding CoAlt data in order to provide meaningful recommendations to their districts about curriculum and other policies. The Contractor shall include input and/or participation from their psychometrics team and content team in the development of these training materials.

The Interpretive Guide shall include the same types of information provided in these trainings which shall reinforce the training that the DACs and Special Education Directors receive.

B.9.4. Webinars. The Contractor shall conduct at least one (1) live WebEx for each of the types of training. One webinar shall describe and demonstrate the procedures for local educators to use to administer and score the CoAlt. The other webinar shall be used to assist local educators to understand, use, and report the results from the CoAlt. The Contractor shall record these trainings and make them always-available-trainings as an additional resource for district personnel who may not be able to attend the face-to-face session on administration training or to share important assessment information with their colleagues. These webinars shall be posted online at the Assessment Unit website.

The live WebEx shall include opportunities for participants to ask questions and interact with presenters either via text chat or voice. An additional WebEx may be based off of recordings of the Face-to-Face training sessions or created as unique training sessions.

The Contractor shall supply online and conference call opportunities for training for those unable to attend a face-to-face or live session.

B.9.5. Online Training Support. The Contractor shall create training materials and provide customer support specific to online reporting of assessment raw scores.

The training materials shall at least include a PearsonAccess™ user manual with an easy to understand set of directions, including screenshots, for operating the reporting of assessment raw scores software.

B.10. Customer Service

The Contractor shall provide technical and logistical support in a responsive manner which minimizes school personnel and student burden, disruption and inconvenience.

B.10.1. District Assessment Coordinator Routine Communications/Notifications. The Contractor's program management team for the CoAlt shall work with CDE to determine the types of communications and notifications that should be directed to the DACs. The communications shall be provided to CDE for sending via a listserv that is currently in use.

B.10.2. Telephone and E-mail Support. The Contractor's Customer Service Center (CSC) personnel will be trained specifically for the CoAlt program. Customers will have access to live support via email and a dedicated toll-free phone number from 7:00 a.m. to 6:00 p.m. Mountain Time each weekday, excluding federal and Colorado state holidays. Customer service personnel must be able to clearly articulate spoken English. The customer service center must be located within the 48 contiguous states. CDE reserves the right to approve the Customer service lead.

When customer service staff is not available to take a call, a voicemail service system must be available to record the caller's message. Messages must be returned in a timely manner, generally within one hour or less but always within one business day.

DACs may also submit their questions via e-mail to the Project Manager and must receive a response to their e-mail within 24 hours.

B.10.3. Issue Resolution System. Customer service staff shall have a system to ensure that issues raised by DACs have been satisfactorily resolved. For example, if a DAC has requested additional assessment materials, the system shall ensure that 1) the DAC is given instructions on how to order the materials online and that 2) the customer service representative will verify that the order has been placed and fulfilled. The Contractor shall notify CDE of any communication with the field regarding urgent or sensitive issues. If an issue arises that requires executive engagement and authority for resolution, the Contractor's First Response protocol will provide proper guidance to the Contractor's personnel. This protocol calls for the evaluation of corrective actions and establishes how an issue will be tracked until its closure. This protocol will keep CDE aware of the issue and how it is being resolved.

B.10.4. Records of Interaction with Customers. All contacts shall be tracked by the Contractor's Service Management software, a secure incident-tracking software tool tailored specifically for the Contractor's Customer Service Center (CSC). With each incoming contact, CSC staff will generate a ticket that enables tracking the incident through to resolution. The system will collect customer name, district, school, date and time of incoming contact, issue description and resolution, and date and time of issues and resolution. Tickets will be archived and ticket numbers will also be provided to the customer. Tickets may be escalated to specialists for their documentation when handling calls to generate a full history of each issue. Sortable reports from the Contractor's incident tracking system are available to CDE for review in electronic format.

B.10.5. Customer Service Initiated Calls and Communications. All CoAlt-specific training for CSC, including any scripts, shall be drafted and provided to CDE for final approval. Additionally, customer service staff may be asked to initiate e-mail communications in unusual circumstances by CDE.

B.10.6. Customer Feedback Survey. The Contractor shall create and administer at least once annually a customer feedback survey, including both close ended and open ended items. The survey will record feedback on customer satisfaction with score submission, ordering, fulfillment, security, receiving, returning, and other criteria consistent with best business practices. The Contractor will be responsible for compiling responses. The feedback surveys will be available to CDE for review. They will also be used in planning for the next year's program. Annually, the Contractor will survey CDE decision-makers reviewing products and services.

B.10.7. DAC Website. The Contractor shall develop and maintain a website for DACs via Contractor-provided login names and passwords to access training and assessment materials. This website will contain both secure and unsecure documents necessary for the DACs to perform their duties and responsibilities. These documents include Test Examiner and Test Coordinator manuals, training manuals, data interpretation manuals, as well as various order and request forms. In addition, the site shall provide DACs with access to their district assessment data and scores.

The Contractor's web access management solution will be rules-based, allowing or denying access based on definable user attributes. This web access tool, PearsonAccess™ will be configured according to Colorado requirements and determine access privileges for individuals or groups of users at the state, district, and school levels.

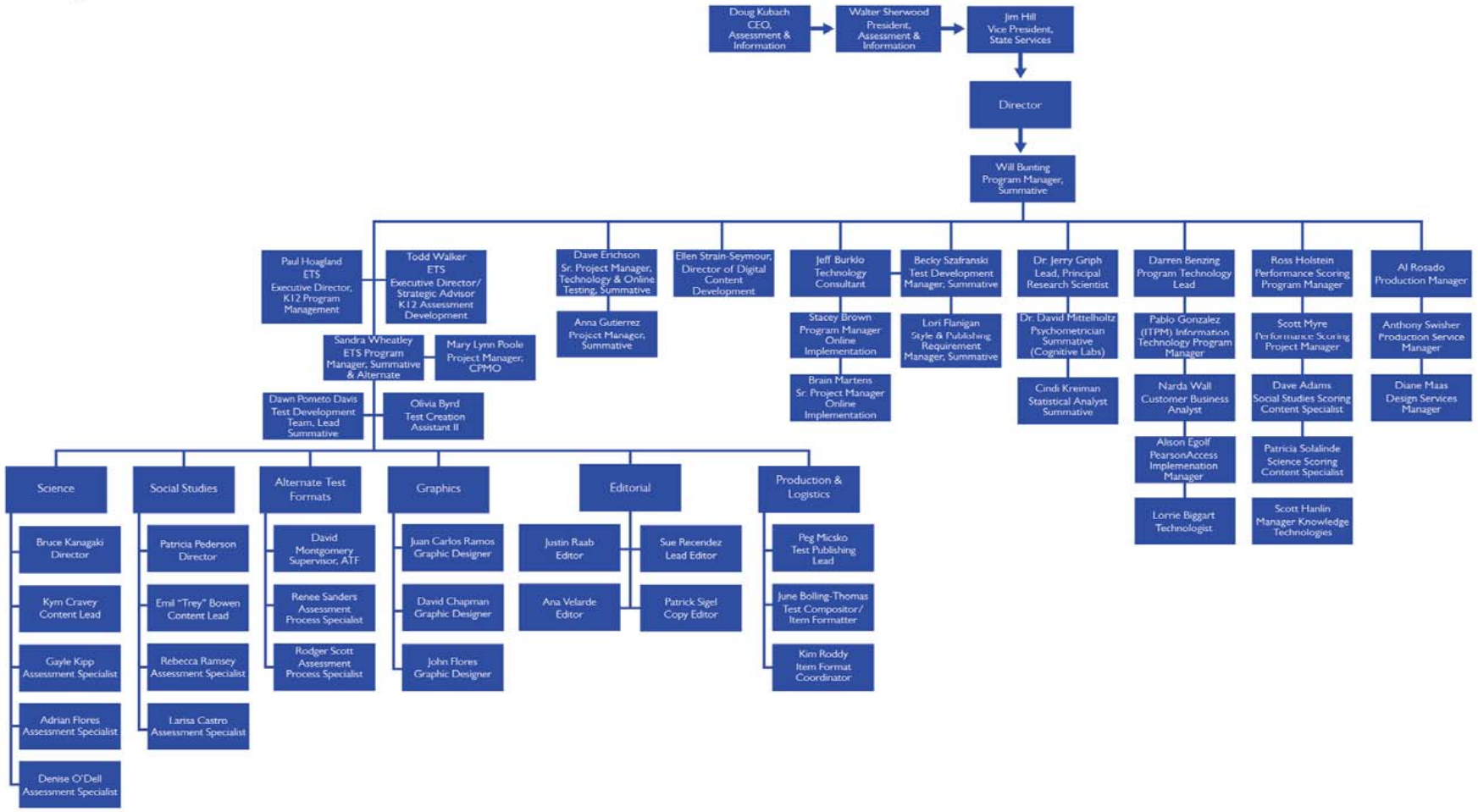
B.10.8. Customer Support. In addition to the "help" functions embedded in the score reporting software and automated online or phone in support services, the Contractor shall provide

customer support for the use of the alternate assessment online score reporting software that includes phone accessible support personnel.

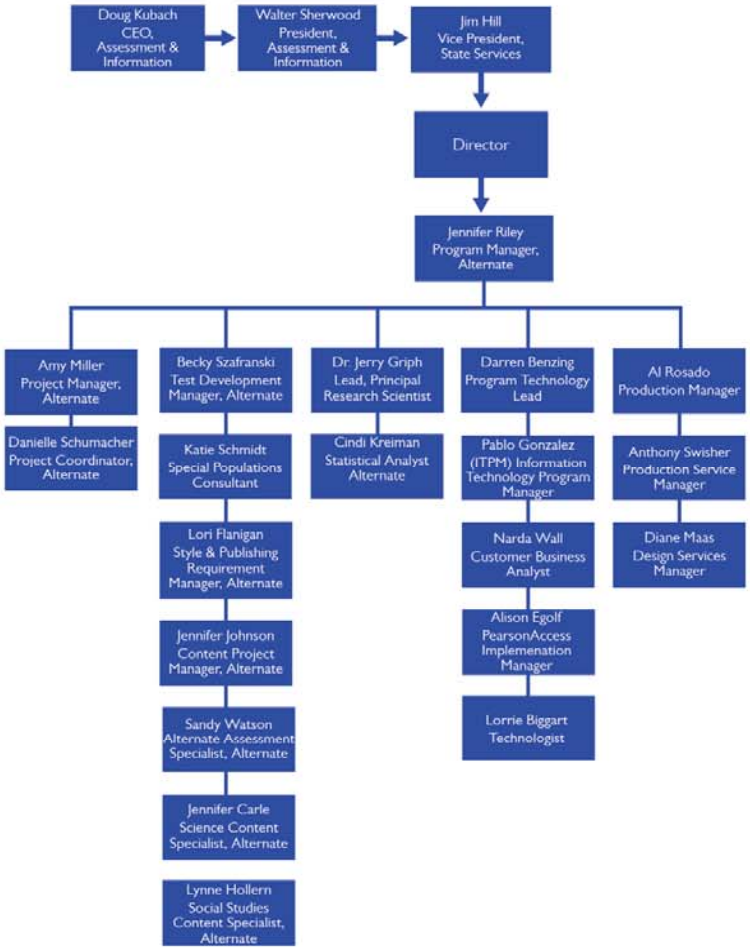
The Contractor's CSC staff members will be trained on the specifics of the Colorado program. Callers from Colorado will have access to live support via email and a dedicated toll-free phone number. The Contractor's specialists with detailed program information and focused expertise in the database, network, infrastructure, and software components of the Contractor's web-based services will respond to questions that cannot be resolved at the initial point of contact.

Attachment 1: Organizational Charts

Colorado Student Assessments
Pearson and ETS Organizational Chart



Colorado Alternate Assessment
Pearson Organizational Chart



Attachment 2: Allocation of Key Personnel

Colorado Student Assessments Pearson/ETS Program Team		
Name	**Title**	**Time Commitment**
Program Management Team		
Jim Hill	Pearson Vice President, State Services	25% Executive Oversight
TBD	Pearson Director, State Services	100% Executive Oversight
Will Bunting	Pearson Program Manager	100% Summative
Anna Gutierrez	Pearson Project Manager	100% Summative
Dave Erichson	Pearson Senior Project Manager, Online Testing	100% Summative
Jennifer Riley	Pearson Program Manager	100% Alternate
Amy Miller	Pearson Project Manager	100% Alternate
Danielle Schumacher	Pearson Project Coordinator	100% Alternate
Dr. Ellen Strain-Seymour	Pearson Director, Digital Content Development	As needed
Jeff Burklo	Pearson Program Technology Consultant	50% in 2013-2014 25% in 2015-2017 Summative and Alternate
Rebecca Szafranski	Pearson Test Development Manager	25% Summative; 50% Alternate
Dr. Todd Walker	ETS Executive Director, Strategic Adviser	As needed, Summative
Dr. Paul Hoagland	ETS Executive. Director, Program Management	As needed, Summative
Sandra Wheatley	ETS Program Manager	50% Summative
Dawn Pomento	ETS Test Development Team Lead	50% Summative
Mary Lynn Poole	ETS Project Manager	15% Summative

Pearson Psychometric and Research Team		
Dr. Jon Twing	Chief Measurement Officer	As needed; policy consultation/strategic advisor
Dr. Walter "Denny" Way	Senior Vice President, Psychometric and Research Services	Executive Oversight
Dr. Rob Kirkpatrick	Vice President, Measurement Services	Executive Oversight
Dr. Gerald Griph	Lead, Principal Research Scientist	40% Summative; 40% Alternate
Dr. David Mittelholtz	Psychometrician	10% Summative; 10% Cognitive Labs
Cindi Kreiman	Research Associate	35% Summative; 35% Alternate
ETS Summative Content Development Team		
Patricia Pederson	Social Studies Director	As needed, Summative
Emil "Trey" Bowen	Social Studies Content Lead	50% Summative
Rebecca Ramsey	Social Studies Assessment Lead	25% Summative
Larisa Castro	Social Studies Assessment Specialist	25% Summative
Bruce Kanagaki	Science Director	As needed, Summative
Kym Cravey	Science Content Lead	50% Summative
Denise O'Dell	Science Assessment	35% Summative
Adrian Flores	Science Assessment	35% Summative
Gayle Kipp	Science Assessment	30% Summative
Pearson Content Development Team (Content Support Services)		
Jennifer Johnson	Content Project Manager	10% Summative; 50% Alternate
Lori Flanigan	Style Guide Manager	10% Summative; 10% Alternate
Katie Schmidt	Lead Alternate Assessment Specialist	50% Alternate
Sandy Watson	Alternate Assessment Specialist	75% Alternate
Jennifer Carle	Science Content Specialist	75% Alternate
Lynne Hollern	Social Studies Content Specialist	50% Alternate

Pearson Scoring Team		
Ross Holstein	Perf Scoring Program Manager	10% Summative
Scott Myre	Perf Scoring Project Manager	50% Summative
Dave Adams	Content Specialist, Social Studies	20% Summative
Patricia Solalinde	Content Specialist, Science	20% Summative
Pearson Technology Team		
Darren Benzing	Program Technology Manager	30% Summative; 15% Alternate
Pablo Gonzalez	IT Project Manager	30% Summative; 20% Alternate
Narda Wall	Customer Business Analyst	45% Summative; 25% Alternate
Lorie Biggart	Technologist	20% Summative; 20% Alternate
Alison Egolf	PearsonAccess™ Implementation Manager	20% Summative; 5% Alternate
Pearson and ETS Support Team		
Al Rosado	Pearson Production Manager	20% Summative
Anthony Swisher	Pearson Production Services Manager	20% Summative
Diane Maas	Pearson Design Services Manager.	20% Summative
Peg Micsko	ETS Test Publishing Lead	As needed, Summative
June Bolling-Thomas	ETS Test Compositor/Item Formatter	20% Summative
Kim Roddy	ETS Item Format Coordinator	20% Summative
Juan Carlos Ramos	ETS Supervisor, Graphic Design	As needed, Summative
John Flores	ETS Graphic Design Specialist	60% Summative
David Chapman	ETS Graphic Designer	15% Summative
Sue Recendez	ETS Lead Editor	90% Summative
Patrick Sigel	ETS Editor	60% Summative
Olivia Byrd	ETS Test Creation Assistant	60% Summative
David Montgomery	ETS Supervisor, Alternative Test Formats (ATF)	25% Summative
Renee Sanders	ETS Assessment Process Specialist, ATF	25% Summative
Rodger Scott	ETS Assessment Process Specialist, ATF	25% Summative

Attachment 3: Researchers List

Suggested Members of the Colorado Research Alliance	
Organization	**Participant(s)**
Wayne J. Camara	Vice President, Research & Analysis, College Board
Andrew C. Porter	Dean, University of Pennsylvania, Graduate School of Education
Gregory Camille	Professor, University of Colorado
Eva Baker	Co-Director, UCLA Center for the Study of Evaluation (CSE)/National Center for Research on Evaluation, Standards, and Student Testing (CRESST)
Lloyd Bond	Senior Scholar, Carnegie Foundation for the Advancement of Teaching
David Bressoud	DeWitt Wallace Professor & Chair Mathematics and Computer Science, Macalester College
Francis (Skip) Fennell	Professor of Education, McDaniel College
Henry (Hank) Kepner	Mathematics Education, Department of Curriculum & Instruction and Mathematical Sciences, University of Wisconsin, Milwaukee
Robert Linn	Co-Director, CRESST, University of Colorado at Boulder
Bernard Madison	Professor of Mathematics, Department of Mathematical Sciences, University of Arkansas
William Schmidt	University Distinguished Professor, Third International Mathematics and Science Study (TIMSS), Michigan State University
James Sellers	Associate Professor and Director of Undergraduate Mathematics, Penn State University

Suggested Members of the Colorado Research Alliance	
Organization	**Participant(s)**
Sharif Shakrani	Director, Education Policy Center, Michigan State University
David S. Spence	President, Southern Regional Education Board
Uri Treisman	Director, Charles A. Dana Center
Jon S. Twing, PhD	Chief Measurement Officer, Pearson
Denny Way, Ph.D.	SVP, Pearson
Gregory M. Tobin	Pearson Addison-Wesley
Lynn Streeter, PhD	Pearson Knowledge Technologies (PKT)

Colorado Summative Schedule - FY2013

ID	Task Name	Duration	Start	Finish	Resource Names
1	**Key Activities for Summative Assessments**	**137 days**	**Mon 12/24/12**	**Wed 7/3/13**	
2	**START**	**137 days**	**Mon 12/24/12**	**Wed 7/3/13**	
3	**Program Management**	**137 days**	**Mon 12/24/12**	**Wed 7/3/13**	
4	**Annual Project Schedule**	**5 days**	**Mon 12/24/12**	**Fri 12/28/12**	
5	Draft Project Schedule Created	0 days	Mon 12/24/12	Mon 12/24/12	Pearson
6	Project Schedule - CDE Review	5 days	Mon 12/24/12	Fri 12/28/12	CDE
7	Project Schedule - CDE and Pearson Joint Review	5 days	Mon 12/24/12	Fri 12/28/12	Pearson
8	Project Schedule Updated and Baselined	5 days	Mon 12/24/12	Fri 12/28/12	Pearson
9	**Project Meetings**	**121 days**	**Wed 1/2/13**	**Wed 6/19/13**	
10	**Project Meeting 1**	**16 days**	**Wed 1/2/13**	**Wed 1/23/13**	
11	Agenda Drafted and Delivered to CDE	2 days	Wed 1/2/13	Thu 1/3/13	Pearson
12	Meeting held (Denver, CO)	2 days	Tue 1/15/13	Wed 1/16/13	Pearson
13	Meeting Minutes Distributed	5 days	Thu 1/17/13	Wed 1/23/13	Pearson
14	**Project Meeting 2 - In person**	**14 days**	**Fri 2/1/13**	**Wed 2/20/13**	
15	Agenda Drafted and Delivered to CDE	2 days	Fri 2/1/13	Mon 2/4/13	Pearson
16	Meeting held (San Antonio, TX)	2 days	Tue 2/12/13	Wed 2/13/13	Pearson
17	Meeting Minutes Distributed	5 days	Thu 2/14/13	Wed 2/20/13	Pearson
18	**Project Meeting 3**	**14 days**	**Fri 3/1/13**	**Wed 3/20/13**	
19	Agenda Drafted and Delivered to CDE	2 days	Fri 3/1/13	Mon 3/4/13	Pearson
20	Meeting held (Denver, CO)	2 days	Tue 3/12/13	Wed 3/13/13	Pearson
21	Meeting Minutes Distributed	5 days	Thu 3/14/13	Wed 3/20/13	Pearson
22	**Project Meeting 4**	**13 days**	**Mon 4/1/13**	**Wed 4/17/13**	
23	Agenda Drafted and Delivered to CDE	2 days	Mon 4/1/13	Tue 4/2/13	Pearson
24	Meeting held (Denver, CO)	2 days	Tue 4/9/13	Wed 4/10/13	Pearson
25	Meeting Minutes Distributed	5 days	Thu 4/11/13	Wed 4/17/13	Pearson
26	**Project Meeting 5 - In person**	**16 days**	**Wed 5/1/13**	**Wed 5/22/13**	
27	Agenda Drafted and Delivered to CDE	2 days	Wed 5/1/13	Thu 5/2/13	Pearson
28	Meeting held (San Antonio, TX)	2 days	Tue 5/14/13	Wed 5/15/13	Pearson
29	Meeting Minutes Distributed	5 days	Thu 5/16/13	Wed 5/22/13	Pearson
30	**Project Meeting 6**	**13 days**	**Mon 6/3/13**	**Wed 6/19/13**	
31	Agenda Drafted and Delivered to CDE	2 days	Mon 6/3/13	Tue 6/4/13	Pearson
32	Meeting held (Denver, CO)	2 days	Tue 6/11/13	Wed 6/12/13	Pearson
33	Meeting Minutes Distributed	5 days	Thu 6/13/13	Wed 6/19/13	Pearson
34	**Monthly Reports**	**128 days**	**Fri 1/4/13**	**Wed 7/3/13**	

ID	Task Name	Duration	Start	Finish	Resource Names
35	Dec	0 days	Fri 1/4/13	Fri 1/4/13	Pearson
36	Jan	0 days	Tue 2/5/13	Tue 2/5/13	Pearson
37	Feb	0 days	Tue 3/5/13	Tue 3/5/13	Pearson
38	Mar	0 days	Wed 4/3/13	Wed 4/3/13	Pearson
39	Apr	0 days	Fri 5/3/13	Fri 5/3/13	Pearson
40	May	0 days	Wed 6/5/13	Wed 6/5/13	
41	Jun	0 days	Wed 7/3/13	Wed 7/3/13	
42	**Program Improvement**	**96 days**	**Fri 2/15/13**	**Fri 6/28/13**	
43	Program Improvement Plan - Development	15 days	Fri 2/15/13	Thu 3/7/13	
44	Program Improvement Plan - Production	15 days	Tue 2/19/13	Mon 3/11/13	
45	Program Improvement Plan - Administration	15 days	Mon 4/29/13	Fri 5/17/13	
46	Program Improvement Plan - Scoring	15 days	Wed 5/22/13	Tue 6/11/13	
47	Program Improvement Plan - Data Processing	15 days	Fri 5/24/13	Thu 6/13/13	
48	Program Improvement Plan - Reporting and Psychometrics	15 days	Fri 6/7/13	Thu 6/27/13	
49	Program Improvement Plan - Meetings	15 days	Mon 6/10/13	Fri 6/28/13	
50	**Invoices**	**55 days**	**Fri 3/29/13**	**Fri 6/14/13**	
51	Invoice Q3	0 days	Fri 3/29/13	Fri 3/29/13	
52	Invoice Q4	0 days	Fri 6/14/13	Fri 6/14/13	
53	**Assessment Development**	**115 days**	**Mon 12/24/12**	**Fri 5/31/13**	
54	**Documents - Development Specs**	**1 day**	**Mon 12/24/12**	**Mon 12/24/12**	
55	Eligible Content Document - Final	1 day	Mon 12/24/12	Mon 12/24/12	
56	Claims Document - Final	1 day	Mon 12/24/12	Mon 12/24/12	
57	Reporting Categories Document - Final	1 day	Mon 12/24/12	Mon 12/24/12	
58	Assessment Framework - Final	1 day	Mon 12/24/12	Mon 12/24/12	
59	Test Blueprints/Specifications - Final	1 day	Mon 12/24/12	Mon 12/24/12	
60	**Cognitive Lab**	**65 days**	**Mon 3/4/13**	**Fri 5/31/13**	
61	**Cognitive Labs - Science, Social Studies**	**65 days**	**Mon 3/4/13**	**Fri 5/31/13**	
62	Recruit Cognitive lab Participants	25 days	Mon 3/4/13	Fri 4/5/13	Pearson
63	Development of Cognitive Lab Materials	15 days	Mon 4/1/13	Fri 4/19/13	Pearson
64	Conduct Cognitive Labs	5 days	Mon 4/29/13	Fri 5/3/13	Pearson
65	Cognitive Labs Report - Draft	10 days	Mon 5/6/13	Fri 5/17/13	Pearson
66	Cognitive Labs Report - Final	10 days	Mon 5/20/13	Fri 5/31/13	Pearson
67	**Style Guide**	**1 day**	**Mon 12/24/12**	**Mon 12/24/12**	
68	Colorado Style Guide - Draft	1 day	Mon 12/24/12	Mon 12/24/12	Pearson

ID	Task Name	Duration	Start	Finish	Resource Names
69	Colorado Style Guide – Final for year	1 day	Mon 12/24/12	Mon 12/24/12	Pearson
70	**Item Development**	**4 days**	**Fri 2/8/13**	**Wed 2/13/13**	
71	Item Development Complete	1 day	Fri 2/8/13	Fri 2/8/13	Pearson
72	Bias and Sensitivity Review Conducted	2 days	Tue 2/12/13	Wed 2/13/13	Pearson
73	**Test Ancillary Material - Development**	**30 days**	**Mon 12/24/12**	**Fri 2/1/13**	
74	Proctors Manual Produced	30 days	Mon 12/24/12	Fri 2/1/13	Pearson
75	**Form Development (Spring 2013 Field Test)**	**16 days**	**Thu 1/31/13**	**Thu 2/21/13**	
76	ETS builds stand-alone field tests-Final (Reading, Math, Science, Spanish)	10 days	Thu 1/31/13	Wed 2/13/13	Pearson
77	CDE Reviews final Stand-alone field tests (on-site)	2 days	Thu 2/14/13	Fri 2/15/13	CDE
78	Edit forms after CDE review (on-site)	4 days	Mon 2/18/13	Thu 2/21/13	Pearson
79	Field Test Form Development - Final	0 days	Thu 2/21/13	Thu 2/21/13	Pearson
80	**Test Administration**	**10 days**	**Mon 4/29/13**	**Fri 5/10/13**	
81	Field Test Administration Window	10 days	Mon 4/29/13	Fri 5/10/13	Pearson
82	**Web-Based Online Test Delivery System**	**87 days**	**Mon 12/24/12**	**Wed 4/24/13**	
83	**Online Readiness Assessment**	**65 days**	**Mon 12/24/12**	**Fri 3/22/13**	
84	Conduct the Online Readiness Assessment	60 days	Mon 12/24/12	Fri 3/15/13	Pearson
85	Online Readiness Assessment Results	5 days	Mon 3/18/13	Fri 3/22/13	Pearson
86	**Online Test Delivery**	**13 days**	**Fri 4/5/13**	**Wed 4/24/13**	
87	CDE approves Online Forms	0 days	Fri 4/5/13	Fri 4/5/13	
88	Forms Loaded in Online Test Delivery System	0 days	Wed 4/24/13	Wed 4/24/13	Pearson
89	**Scanning and Scoring**	**2 days**	**Tue 6/4/13**	**Wed 6/5/13**	
90	Rangefinding Meeting	2 days	Tue 6/4/13	Wed 6/5/13	Pearson

Colorado Summative Schedule - FY2014

ID	Task Name	Duration	Start	Finish	Resource Names
0	**CO Summative - FY2014**	**585 days**	**Mon 6/3/13**	**Mon 8/31/15**	
1	**START**	**585 days**	**Mon 6/3/13**	**Mon 8/31/15**	
2	**General**	**5 days**	**Mon 7/1/13**	**Fri 7/5/13**	
3	Security Plan updated and rebaselined	5 days	Mon 7/1/13	Fri 7/5/13	Pearson
4	**Program Management**	**313 days**	**Mon 7/1/13**	**Wed 9/10/14**	
5	**Project Schedule**	**9 days**	**Mon 7/1/13**	**Thu 7/11/13**	
6	Draft Project Schedule Created	4 days	Mon 7/1/13	Thu 7/4/13	Pearson/ETS
7	Project Schedule - CDE Review	3 days	Fri 7/5/13	Tue 7/9/13	CDE
8	Project Schedule - CDE and Pearson Joint Review	1 day	Wed 7/10/13	Wed 7/10/13	Pearson/ETS/CDE
9	Project Schedule Updated and Baselined	1 day	Thu 7/11/13	Thu 7/11/13	Pearson
10	**Project Meetings**	**253 days**	**Mon 7/1/13**	**Wed 6/18/14**	
11	**Project Meeting 1**	**13 days**	**Mon 7/1/13**	**Wed 7/17/13**	
12	Agenda Drafted and Delivered to CDE	2 days	Mon 7/1/13	Tue 7/2/13	Pearson
13	Meeting held (Denver, CO)	2 days	Tue 7/9/13	Wed 7/10/13	
14	Meeting Minutes Distributed	5 days	Thu 7/11/13	Wed 7/17/13	Pearson
15	**Project Meeting 2**	**15 days**	**Thu 8/1/13**	**Wed 8/21/13**	
16	Agenda Drafted and Delivered to CDE	2 days	Thu 8/1/13	Fri 8/2/13	Pearson
17	Meeting held (Denver, CO)	2 days	Tue 8/13/13	Wed 8/14/13	
18	Meeting Minutes Distributed	5 days	Thu 8/15/13	Wed 8/21/13	Pearson
19	**Project Meeting 3 - In person**	**13 days**	**Mon 9/2/13**	**Wed 9/18/13**	
20	Agenda Drafted and Delivered to CDE	2 days	Mon 9/2/13	Tue 9/3/13	Pearson
21	Meeting held (San Antonio, TX)	2 days	Tue 9/10/13	Wed 9/11/13	
22	Meeting Minutes Distributed	5 days	Thu 9/12/13	Wed 9/18/13	Pearson
23	**Project Meeting 4**	**12 days**	**Tue 10/1/13**	**Wed 10/16/13**	
24	Agenda Drafted and Delivered to CDE	2 days	Tue 10/1/13	Wed 10/2/13	Pearson
25	Meeting held (Denver, CO)	2 days	Tue 10/8/13	Wed 10/9/13	
26	Meeting Minutes Distributed	5 days	Thu 10/10/13	Wed 10/16/13	Pearson
27	**Project Meeting 5**	**14 days**	**Fri 11/1/13**	**Wed 11/20/13**	
28	Agenda Drafted and Delivered to CDE	2 days	Fri 11/1/13	Mon 11/4/13	Pearson
29	Meeting held (Denver, CO)	2 days	Tue 11/12/13	Wed 11/13/13	
30	Meeting Minutes Distributed	5 days	Thu 11/14/13	Wed 11/20/13	Pearson
31	**Project Meeting 6 - In person**	**13 days**	**Mon 12/2/13**	**Wed 12/18/13**	
32	Agenda Drafted and Delivered to CDE	2 days	Mon 12/2/13	Tue 12/3/13	Pearson
33	Meeting held (San Antonio, TX)	2 days	Tue 12/10/13	Wed 12/11/13	
34	Meeting Minutes Distributed	5 days	Thu 12/12/13	Wed 12/18/13	Pearson
35	**Project Meeting 7**	**16 days**	**Wed 1/1/14**	**Wed 1/22/14**	
36	Agenda Drafted and Delivered to CDE	2 days	Wed 1/1/14	Thu 1/2/14	Pearson
37	Meeting held (Denver, CO)	2 days	Tue 1/14/14	Wed 1/15/14	
38	Meeting Minutes Distributed	5 days	Thu 1/16/14	Wed 1/22/14	Pearson

Colorado Summative Schedule - FY2014

ID	Task Name	Duration	Start	Finish	Resource Names
39	**Project Meeting 8**	**13 days**	**Mon 2/3/14**	**Wed 2/19/14**	
40	Agenda Drafted and Delivered to CDE	2 days	Mon 2/3/14	Tue 2/4/14	Pearson
41	Meeting held (Denver, CO)	2 days	Tue 2/11/14	Wed 2/12/14	
42	Meeting Minutes Distributed	5 days	Thu 2/13/14	Wed 2/19/14	Pearson
43	**Project Meeting 9 - In person**	**13 days**	**Mon 3/3/14**	**Wed 3/19/14**	
44	Agenda Drafted and Delivered to CDE	2 days	Mon 3/3/14	Tue 3/4/14	Pearson
45	Meeting held (San Antonio, TX)	2 days	Tue 3/11/14	Wed 3/12/14	
46	Meeting Minutes Distributed	5 days	Thu 3/13/14	Wed 3/19/14	Pearson
47	**Project Meeting 10**	**12 days**	**Tue 4/1/14**	**Wed 4/16/14**	
48	Agenda Drafted and Delivered to CDE	2 days	Tue 4/1/14	Wed 4/2/14	Pearson
49	Meeting held (Denver, CO)	2 days	Tue 4/8/14	Wed 4/9/14	
50	Meeting Minutes Distributed	5 days	Thu 4/10/14	Wed 4/16/14	Pearson
51	**Project Meeting 11**	**15 days**	**Thu 5/1/14**	**Wed 5/21/14**	
52	Agenda Drafted and Delivered to CDE	2 days	Thu 5/1/14	Fri 5/2/14	Pearson
53	Meeting held (Denver, CO)	2 days	Tue 5/13/14	Wed 5/14/14	
54	Meeting Minutes Distributed	5 days	Thu 5/15/14	Wed 5/21/14	Pearson
55	**Project Meeting 12 - In person**	**13 days**	**Mon 6/2/14**	**Wed 6/18/14**	
56	Agenda Drafted and Delivered to CDE	2 days	Mon 6/2/14	Tue 6/3/14	Pearson
57	Meeting held (San Antonio, TX)	2 days	Tue 6/10/14	Wed 6/11/14	
58	Meeting Minutes Distributed	5 days	Thu 6/12/14	Wed 6/18/14	Pearson
59	**Monthy Reports**	**238 days**	**Mon 8/5/13**	**Thu 7/3/14**	
60	Jul	0 days	Mon 8/5/13	Mon 8/5/13	Pearson
61	Aug	0 days	Wed 9/4/13	Wed 9/4/13	Pearson
62	Sep	0 days	Thu 10/3/13	Thu 10/3/13	Pearson
63	Oct	0 days	Tue 11/5/13	Tue 11/5/13	Pearson
64	Nov	0 days	Wed 12/4/13	Wed 12/4/13	Pearson
65	Dec	0 days	Mon 1/6/14	Mon 1/6/14	Pearson
66	Jan	0 days	Wed 2/5/14	Wed 2/5/14	Pearson
67	Feb	0 days	Wed 3/5/14	Wed 3/5/14	Pearson
68	Mar	0 days	Thu 4/3/14	Thu 4/3/14	Pearson
69	Apr	0 days	Mon 5/5/14	Mon 5/5/14	Pearson
70	May	0 days	Wed 6/4/14	Wed 6/4/14	Pearson
71	Jun	0 days	Thu 7/3/14	Thu 7/3/14	Pearson
72	**DAC**	**107 days**	**Wed 10/16/13**	**Thu 3/13/14**	
73	DAC Academy	2 days	Wed 2/19/14	Thu 2/20/14	Pearson
74	DAC Management 1	2 days	Wed 10/16/13	Thu 10/17/13	Pearson
75	DAC Management 2	2 days	Wed 3/12/14	Thu 3/13/14	Pearson
76	**Program Improvement**	**274 days**	**Fri 8/23/13**	**Wed 9/10/14**	
77	Program Improvement Plan - Development	15 days	Tue 1/14/14	Mon 2/3/14	Pearson

Colorado Summative Schedule - FY2014

ID	Task Name	Duration	Start	Finish	Resource Names
78	Program Improvement Plan - Production	15 days	Thu 2/27/14	Wed 3/19/14	Pearson
79	Program Improvement Plan - Shipping and Receipt	15 days	Tue 4/1/14	Mon 4/21/14	Pearson
80	Program Improvement Plan - Administration	15 days	Mon 5/5/14	Fri 5/23/14	Pearson
81	Program Improvement Plan - Scanning	15 days	Thu 5/15/14	Wed 6/4/14	Pearson
82	Program Improvement Plan - Scoring	15 days	Fri 6/27/14	Thu 7/17/14	Pearson
83	Program Improvement Plan - Data Processing	15 days	Thu 5/8/14	Wed 5/28/14	Pearson
84	Program Improvement Plan - Reporting and Psychometrics	15 days	Thu 8/21/14	Wed 9/10/14	Pearson
85	Program Improvement Plan - Meetings	15 days	Fri 8/23/13	Thu 9/12/13	Pearson
86	**Invoices**	**239 days**	**Mon 9/30/13**	**Fri 8/29/14**	
87	Invoice Q1	0 days	Mon 9/30/13	Mon 9/30/13	Pearson
88	Invoice Q2	0 days	Tue 12/31/13	Tue 12/31/13	Pearson
89	Invoice Q3	0 days	Mon 3/31/14	Mon 3/31/14	Pearson
90	Invoice Q4	0 days	Fri 6/13/14	Fri 6/13/14	Pearson
91	Invoice - "tail"	0 days	Fri 8/29/14	Fri 8/29/14	Pearson
92	**Assessment Development**	**303 days**	**Mon 6/3/13**	**Wed 7/30/14**	
93	**Documents - Development Specs**	**74 days**	**Mon 7/1/13**	**Thu 10/10/13**	
94	Eligible Content Document - Final	1 day	Mon 7/1/13	Mon 7/1/13	ETS
95	Claims Document - Final	1 day	Thu 8/1/13	Thu 8/1/13	ETS
96	Reporting Categories Document - Final	1 day	Fri 8/9/13	Fri 8/9/13	ETS
97	Assessment Framework - Final	1 day	Fri 8/16/13	Fri 8/16/13	ETS
98	Performance Level Descriptors – General - Final	5 days	Fri 8/30/13	Thu 9/5/13	ETS
99	Performance Level Descriptors – Grade Level Specific - Final	1 day	Thu 10/10/13	Thu 10/10/13	ETS
100	Test Blueprints/Specifications - Final	0 days	Mon 7/1/13	Mon 7/1/13	ETS
101	**Style Guide**	**30 days**	**Mon 7/1/13**	**Fri 8/9/13**	
102	Colorado Style Guide - Draft	30 days	Mon 7/1/13	Fri 8/9/13	ETS
103	Colorado Style Guide - Final for year	0 days	Fri 8/9/13	Fri 8/9/13	ETS
104	**Performance Event Stimuli and Storyboards (Spring 2015 Field Test)**	**157 days**	**Mon 7/1/13**	**Tue 2/4/14**	
105	Recruit Stimuli and Storyboard Reviewers	25 days	Mon 7/1/13	Fri 8/2/13	Pearson
106	Stimuli and Storyboard Develoment	108 days	Thu 7/25/13	Mon 12/23/13	ETS
107	Passage Selection - CDE Review	10 days	Tue 12/10/13	Mon 12/23/13	CDE
108	Prepare Stimuli and Story Board Training Meeting materials	7 days	Thu 12/26/13	Fri 1/3/14	ETS
109	Stimuli and Storyboard Training Meeting Materials- CDE Review	6 days	Mon 1/6/14	Mon 1/13/14	CDE
110	Edit and ship materials after CDE review	10 days	Tue 1/14/14	Mon 1/27/14	ETS
111	Stimuli and Storyboard Review	3 days	Tue 1/28/14	Thu 1/30/14	ETS
112	ETS sends final results of Stimuli and Storyboard meeting to CDE	1 day	Tue 2/4/14	Tue 2/4/14	ETS
113	**Item Development (Spring 2015 Field Test)**	**133 days**	**Mon 1/27/14**	**Wed 7/30/14**	
114	Item Writer Recruiting	25 days	Mon 1/27/14	Fri 2/28/14	Pearson
115	Develop Training Materials and Item Development Plans	5 days	Tue 2/11/14	Mon 2/17/14	ETS
116	Item Development Training Meeting 1 Materials – CDE Review	5 days	Tue 2/18/14	Mon 2/24/14	CDE

Colorado Summative Schedule - FY2014

ID	Task Name	Duration	Start	Finish	Resource Names
117	Edit and ship materials after CDE review	10 days	Tue 2/25/14	Mon 3/10/14	ETS
118	Item Development Meeting 1	3 days	Tue 3/11/14	Thu 3/13/14	ETS
119	ETS provides developers feedback	43 days	Fri 3/14/14	Tue 5/13/14	ETS
120	ETS develops training materials and item development plans (meeting 2)	5 days	Wed 5/14/14	Tue 5/20/14	ETS
121	Item Writer Recruiting	25 days	Mon 4/28/14	Fri 5/30/14	Pearson
122	Item Development Meeting 2 Materials – CDE Review	3 days	Wed 5/21/14	Fri 5/23/14	CDE
123	Edit and ship materials after CDE review	10 days	Mon 5/26/14	Fri 6/6/14	ETS
124	Item Development Meeting 2	3 days	Tue 6/10/14	Thu 6/12/14	ETS
125	ETS conducts internal Content and Editorial Reviews	30 days	Thu 6/12/14	Wed 7/23/14	ETS
126	Item Review – CDE Review	5 days	Thu 7/24/14	Wed 7/30/14	CDE
127	**Content Review and PLD Meeting - Science, Social Studies (Spring 2014 Field Test)**	**69 days**	**Mon 7/1/13**	**Thu 10/3/13**	
128	Item Review – CDE Review	4 days	Wed 7/31/13	Mon 8/5/13	CDE
129	Recruit Content Review Participants	25 days	Mon 7/1/13	Fri 8/2/13	Pearson
130	ETS Creates training materials for Content and PLD Meetings	7 days	Mon 7/22/13	Tue 7/30/13	ETS
131	Content and PLD Meeting training Materials – CDE Review	4 days	Wed 7/31/13	Mon 8/5/13	CDE
132	Edit and ship materials after CDE review	10 days	Tue 8/6/13	Mon 8/19/13	ETS
133	Content and PLD Meeting	3 days	Tue 8/20/13	Thu 8/22/13	ETS
134	ETS implements edits suggested by committee	30 days	Fri 8/23/13	Thu 10/3/13	ETS
135	**Bias and Sensitivity Review (Spring 2014 Field Test)**	**44 days**	**Mon 7/1/13**	**Thu 8/29/13**	
136	Recruit Bias/Sensitivity Review Participants	25 days	Mon 7/1/13	Fri 8/2/13	Pearson
137	ETS creates training materials for Bias and sensitivity Reviews	8 days	Mon 7/22/13	Wed 7/31/13	ETS
138	Bias and Sensitivity Review training materials – CDE Review	3 days	Thu 8/1/13	Mon 8/5/13	CDE
139	Edit and ship materials after CDE review	10 days	Tue 8/6/13	Mon 8/19/13	ETS
140	Bias and Sensitivity Review Meeting	1 day	Fri 8/23/13	Fri 8/23/13	ETS
141	ETS implements edits suggested by committee	30 days	Mon 7/1/13	Fri 8/9/13	ETS
142	ETS sends final results of Content and Bias Sensitivity Review meeting	1 day	Thu 8/29/13	Thu 8/29/13	ETS
143	**Data Review (Spring 2014 Operational)**	**40 days**	**Mon 6/3/13**	**Fri 7/26/13**	
144	Recruit Data Review Participants	25 days	Mon 6/3/13	Fri 7/5/13	Pearson
145	ETS Prints Data Review Training Materials	5 days	Tue 6/11/13	Mon 6/17/13	ETS
146	Produce Data Review Training Materials – CDE Review	4 days	Tue 6/18/13	Fri 6/21/13	CDE
147	Edit and ship materials after CDE review	10 days	Mon 6/24/13	Fri 7/5/13	ETS
148	Conduct Data Review meeting	3 days	Tue 7/9/13	Thu 7/11/13	ETS
149	ETS implements edits suggested by committee	10 days	Fri 7/12/13	Thu 7/25/13	ETS
150	ETS provides final results of Data Review Meetings	1 day	Fri 7/26/13	Fri 7/26/13	ETS
151	**Form Development (Spring 2014 Operational)**	**121 days**	**Mon 7/29/13**	**Mon 1/13/14**	
152	**Core Test Form Development and form 1 Embedded (Science, Social Studies)**	**52 days**	**Mon 7/29/13**	**Tue 10/8/13**	
153	ETS constructs forms	37 days	Mon 7/29/13	Tue 9/17/13	ETS
154	CDE reviews forms	5 days	Wed 9/18/13	Tue 9/24/13	CDE
155	ETS revises forms based on CDE review	5 days	Wed 9/25/13	Tue 10/1/13	ETS

Colorado Summative Schedule - FY2014

ID	Task Name	Duration	Start	Finish	Resource Names
156	Core Test Form Development – CDE Review Final	5 days	Wed 10/2/13	Tue 10/8/13	CDE
157	Core Test Form Development – Final	0 days	Tue 10/8/13	Tue 10/8/13	ETS
158	**Embedded Field Test Form Development**	**67 days**	**Fri 10/11/13**	**Mon 1/13/14**	
159	ETS constructs forms	50 days	Fri 10/11/13	Thu 12/19/13	ETS
160	CDE reviews forms	5 days	Tue 12/24/13	Mon 12/30/13	CDE
161	ETS revises forms based on CDE review	5 days	Tue 12/31/13	Mon 1/6/14	CDE
162	Embedded Field Test Form Development – Final	5 days	Tue 1/7/14	Mon 1/13/14	ETS
163	ETS sends Production ready files to Pearson (Files to Print)	0 days	Mon 1/13/14	Mon 1/13/14	ETS
164	**Special Populations**	**147 days**	**Mon 7/1/13**	**Tue 1/21/14**	
165	Accommodations Procedures Manual review rounds	60 days	Mon 7/1/13	Fri 9/20/13	Pearson
166	Accommodations Procedures Manual - CDE Review Final	5 days	Mon 9/23/13	Fri 9/27/13	CDE
167	**Paper and Pencil Accommodated Versions**	**25 days**	**Wed 10/9/13**	**Tue 11/12/13**	
168	Paper and Pencil Accommodated Versions Development	20 days	Wed 10/9/13	Tue 11/5/13	
169	Accommodated Materials: Paper and Pencil Accommodated Forms - CDE Review Final	5 days	Wed 11/6/13	Tue 11/12/13	
170	ETS sends Production ready files to Pearson (Files to Print)	0 days	Tue 11/12/13	Tue 11/12/13	
171	**Large Print Test Form Development**	**45 days**	**Wed 11/13/13**	**Tue 1/14/14**	
172	Large Print Development	40 days	Wed 11/13/13	Tue 1/7/14	ETS
173	Accommodated Materials: Large Print - CDE Review Final	5 days	Wed 1/8/14	Tue 1/14/14	CDE
174	ETS sends Production ready files to Pearson (Files to Print)	0 days	Tue 1/14/14	Tue 1/14/14	ETS
175	**Braille Test Form Development**	**75 days**	**Wed 10/9/13**	**Tue 1/21/14**	
176	ETS performs accessibilty review of approved forms	10 days	Wed 10/9/13	Tue 10/22/13	ETS
177	ETS prepares and ships materials for Braille forms review	5 days	Wed 10/23/13	Tue 10/29/13	ETS
178	Braille Forms Review Meeting	5 days	Wed 10/30/13	Tue 11/5/13	ETS/CO
179	Accommodated Materials: Braille Review	0 days	Tue 11/5/13	Tue 11/5/13	ETS
180	ETS sends Braille summary meeting results to CDE	5 days	Wed 11/6/13	Tue 11/12/13	ETS
181	Braille Development	50 days	Wed 11/13/13	Tue 1/21/14	ETS
182	ETS sends Production ready files to Pearson (Files to Print)	0 days	Tue 1/21/14	Tue 1/21/14	ETS
183	**Teacher Read Directions**	**50 days**	**Wed 10/9/13**	**Tue 12/17/13**	
184	ETS constructs directions	35 days	Wed 10/9/13	Tue 11/26/13	ETS
185	CDE reviews directions	5 days	Wed 11/27/13	Tue 12/3/13	CDE
186	ETS revises forms based on CDE review	5 days	Wed 12/4/13	Tue 12/10/13	ETS
187	Accommodated Materials: Teacher Read Directions – CDE Review Final	5 days	Wed 12/11/13	Tue 12/17/13	CDE
188	ETS sends Production ready files to Pearson	0 days	Tue 12/17/13	Tue 12/17/13	ETS
189	**English and Spanish Oral Scripts**	**65 days**	**Wed 10/9/13**	**Tue 1/7/14**	
190	ETS constructs scripts	50 days	Wed 10/9/13	Tue 12/17/13	ETS
191	CDE reviews scripts	5 days	Wed 12/18/13	Tue 12/24/13	CDE
192	ETS revises scripts based on CDE review	5 days	Wed 12/25/13	Tue 12/31/13	ETS
193	Accommodated Materials: English Oral Scripts – CDE Review Final	5 days	Wed 1/1/14	Tue 1/7/14	CDE
194	Accommodated Materials: Spanish Oral Scripts – CDE Review Final	5 days	Wed 1/1/14	Tue 1/7/14	CDE

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ID	Task Name	Duration	Start	Finish	Resource Names
195	ETS sends Production ready files to Pearson (files to print)	0 days	Tue 1/7/14	Tue 1/7/14	ETS
196	**Certification for District Translators**	**65 days**	**Mon 7/1/13**	**Fri 9/27/13**	
197	Procedures document produced	60 days	Mon 7/1/13	Fri 9/20/13	ETS
198	Procedures for Certification for District Translators – CDE Review Final	5 days	Mon 9/23/13	Fri 9/27/13	CDE
199	**Test Ancillary Material - Development**	**151 days**	**Mon 7/1/13**	**Mon 1/27/14**	
200	District and School Assessment Coordinator review rounds	60 days	Mon 7/1/13	Fri 9/20/13	Pearson
201	Document Development: District and School Assessment Coordinators Manual – CDE Review Final	5 days	Mon 9/23/13	Fri 9/27/13	CDE
202	Proctors Manual review rounds	30 days	Mon 11/18/13	Fri 12/27/13	Pearson
203	Document Development: Proctors Manual – CDE Review Final	5 days	Mon 12/30/13	Fri 1/3/14	CDE
204	Certification Forms review rounds	60 days	Mon 7/1/13	Fri 9/20/13	Pearson
205	Document Development: Certification Forms – CDE Review Final	5 days	Mon 9/23/13	Fri 9/27/13	CDE
206	Answer Document review rounds	45 days	Mon 7/1/13	Fri 8/30/13	Pearson
207	Document Development: Answer Document Layout - CDE Review Final	5 days	Mon 9/2/13	Fri 9/6/13	CDE
208	Document Development: Test Booklets/Answer Documents – CDE Review Final	5 days	Tue 1/21/14	Mon 1/27/14	CDE
209	Ancillary Materials (Manipulatives) review rounds	60 days	Mon 7/1/13	Fri 9/20/13	Pearson
210	Document Development: Ancillary Materials – CDE Review Final	5 days	Mon 9/23/13	Fri 9/27/13	CDE
211	**Assessment Administration**	**565 days**	**Mon 7/1/13**	**Mon 8/31/15**	
212	**Orders for Materials**	**45 days**	**Mon 2/3/14**	**Fri 4/4/14**	
213	Pre-ID File Transfer (if applicable)	0 days	Mon 2/3/14	Mon 2/3/14	CDE
214	Materials Ordering System Operational	0 days	Mon 2/3/14	Mon 2/3/14	Pearson
215	Materials Ordering Window	20 days	Mon 2/3/14	Fri 2/28/14	
216	Online Rosters Generated	5 days	Mon 3/3/14	Fri 3/7/14	Pearson
217	Additional Materials Ordering Window	10 days	Mon 3/24/14	Fri 4/4/14	
218	**Test and Ancillary Material - Production**	**173 days**	**Mon 7/1/13**	**Wed 2/26/14**	
219	Proctors Manual Produced	15 days	Mon 1/6/14	Fri 1/24/14	Pearson
220	Test Booklets/Answer Documents Produced	32 days	Tue 1/14/14	Wed 2/26/14	Pearson
221	Ancillaries Produced	15 days	Mon 9/30/13	Fri 10/18/13	Pearson
222	Accommodated Materials Produced	25 days	Mon 7/1/13	Fri 8/2/13	Pearson
223	Certification Forms Produced	5 days	Mon 9/30/13	Fri 10/4/13	Pearson
224	**Packaging and Delivery**	**63 days**	**Thu 1/2/14**	**Mon 3/31/14**	
225	Colorado Districts in Shipping System	0 days	Mon 2/3/14	Mon 2/3/14	Pearson
226	Packaging Specifications Finalized	0 days	Thu 1/2/14	Thu 1/2/14	Pearson
227	Non-secure Materials Packaged	20 days	Thu 2/27/14	Wed 3/26/14	Pearson
228	Non-secure Materials Shipped	3 days	Thu 3/27/14	Mon 3/31/14	Pearson
229	Non-secure Materials in District	0 days	Mon 3/31/14	Mon 3/31/14	Pearson
230	Secure Materials Packaged	20 days	Thu 2/27/14	Wed 3/26/14	Pearson
231	Secure Materials Shipped	3 days	Thu 3/27/14	Mon 3/31/14	Pearson
232	Secure Materials in District	0 days	Mon 3/31/14	Mon 3/31/14	Pearson
233	**Test Administration**	**15 days**	**Mon 4/14/14**	**Fri 5/2/14**	

Colorado Summative Schedule - FY2014

ID	Task Name	Duration	Start	Finish	Resource Names
234	Operational On-line Test Administration Window - Science, Social Studies	15 days	Mon 4/14/14	Fri 5/2/14	
235	**Material Return and Verification**	**565 days**	**Mon 7/1/13**	**Mon 8/31/15**	
236	To Be Scored Materials Return EARLY Shipment	0 days	Fri 4/18/14	Fri 4/18/14	CO DISTRICTS
237	To Be Scored Materials Return Shipment	0 days	Thu 5/8/14	Thu 5/8/14	CO DISTRICTS
238	Not To Be Scored Materials Return Shipment	0 days	Mon 7/1/13	Mon 7/1/13	CO DISTRICTS
239	Non-scored Materials Destruction	0 days	Mon 3/2/15	Mon 3/2/15	Pearson
240	Scored Materials Destruction	0 days	Mon 8/31/15	Mon 8/31/15	Pearson
241	Secure Materials Verification – Initial Report	0 days	Fri 7/12/13	Fri 7/12/13	Pearson
242	Secure Materials Verification – Weekly Report	0 days	Fri 7/19/13	Fri 7/19/13	Pearson
243	Secure Materials Verification – Final Report	0 days	Fri 7/26/13	Fri 7/26/13	Pearson
244	**Test Monitoring**	**164 days**	**Mon 7/1/13**	**Fri 2/14/14**	
245	Test Monitoring Protocol review rounds	60 days	Mon 7/1/13	Fri 9/20/13	Pearson
246	Test Monitoring Protocol – CDE Review Final	5 days	Mon 9/23/13	Fri 9/27/13	CDE
247	Test Monitoring Sites Selected	0 days	Wed 1/15/14	Wed 1/15/14	Pearson
248	Test Monitoring Sites Notified – TBD if needed	0 days	Fri 2/14/14	Fri 2/14/14	Pearson
249	Test Monitoring	15 days	Mon 7/1/13	Fri 7/19/13	Pearson
250	**Web-Based Online Test Delivery System**	**195 days**	**Mon 7/1/13**	**Mon 3/31/14**	
251	**Online Readiness Assessment**	**20 days**	**Tue 9/17/13**	**Mon 10/14/13**	
252	Conduct the Online Readiness Assessment	5 days	Tue 9/17/13	Mon 9/23/13	Pearson
253	Online Readiness Assessment Results	5 days	Tue 9/24/13	Mon 9/30/13	Pearson
254	Infrastructure Plan - Final	10 days	Tue 10/1/13	Mon 10/14/13	Pearson
255	**Online Tutorials**	**168 days**	**Mon 7/1/13**	**Wed 2/19/14**	
256	Online Tutorials review rounds	30 days	Thu 1/2/14	Wed 2/12/14	Pearson
257	Online Tutorials – CDE Review Final	5 days	Thu 2/13/14	Wed 2/19/14	CDE
258	Online Tutorials Available for District Use	0 days	Mon 7/1/13	Mon 7/1/13	Pearson
259	Online Accommodations Functionality document review rounds	60 days	Mon 7/1/13	Fri 9/20/13	Pearson
260	Online Accommodations Functionality – CDE Review Final	5 days	Mon 9/23/13	Fri 9/27/13	CDE
261	**Online Test Delivery**	**195 days**	**Mon 7/1/13**	**Mon 3/31/14**	
262	Online Test Delivery System Demonstration	0 days	Mon 2/17/14	Mon 2/17/14	Pearson
263	Online Test Delivery System Testing	30 days	Mon 2/17/14	Fri 3/28/14	Pearson
264	Online Test Delivery System Available for District Installation/Download	0 days	Fri 3/28/14	Fri 3/28/14	Pearson
265	Forms Loaded in Online Test Delivery System	0 days	Mon 3/31/14	Mon 3/31/14	Pearson
266	Mitigation and Contingency Plans - Final	30 days	Mon 7/1/13	Fri 8/9/13	Pearson
267	Establish Unique Log-in ID and Passwords (CDE staff, technology directors, DACs, SACs, test proctors, students)	5 days	Mon 2/3/14	Fri 2/7/14	Pearson
268	Distribute Unique Log-in ID and Passowrds (CDE staff, technology directors, DACs, SACs, test proctors, students)	1 day	Mon 2/10/14	Mon 2/10/14	Pearson
269	**Scanning and Scoring**	**259 days**	**Mon 7/1/13**	**Thu 6/26/14**	
270	**Anchor Validation (spring 2013 Field Test)**	**84 days**	**Mon 8/19/13**	**Thu 12/12/13**	
271	Recruit Anchor Validation Participants	20 days	Mon 8/19/13	Fri 9/13/13	Pearson

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ID	Task Name	Duration	Start	Finish	Resource Names
272	Anchor Validation Meeting	3 days	Tue 10/1/13	Thu 10/3/13	Pearson
273	Scoring Decision Guide review rounds	45 days	Fri 10/4/13	Thu 12/5/13	Pearson
274	Scoring Decision Guide – CDE Review Final	5 days	Fri 12/6/13	Thu 12/12/13	CDE
275	**Scoring Prcocesses**	**259 days**	**Mon 7/1/13**	**Thu 6/26/14**	
276	Scanning Specifications review rounds	20 days	Mon 7/1/13	Fri 7/26/13	Pearson
277	Scanning Specifications – CDE Review Final	5 days	Mon 7/29/13	Fri 8/2/13	CDE
278	Materials Scanned	15 days	Thu 4/24/14	Wed 5/14/14	Pearson
279	Key Verification – CDE Review	2 days	Fri 5/2/14	Mon 5/5/14	CDE
280	Alerts Resolved and Clean Post	10 days	Thu 4/24/14	Wed 5/7/14	Pearson
281	Operational Scoring Window	7 days	Mon 5/12/14	Tue 5/20/14	
282	**Rangefinding**	**29 days**	**Mon 4/21/14**	**Thu 5/29/14**	
283	Recruit Rangefinding Participants	20 days	Mon 4/21/14	Fri 5/16/14	Pearson
284	Rangefinding Meeting	3 days	Tue 5/27/14	Thu 5/29/14	Pearson
285	Scoring Staff Requirements Established	0 days	Mon 7/1/13	Mon 7/1/13	Pearson
286	Scoring Staff Recruitment and Hiring	20 days	Tue 4/1/14	Mon 4/28/14	Pearson
287	Scoring Training Materials review rounds	10 days	Fri 5/30/14	Thu 6/12/14	Pearson
288	Scoring Training Materials – CDE Review Final	3 days	Fri 6/13/14	Tue 6/17/14	CDE
289	Scoring Window	7 days	Wed 6/18/14	Thu 6/26/14	Pearson
290	Scoring Site Scheduled Visit - CDE	2 days	Wed 6/18/14	Thu 6/19/14	CDE
291	Reliability and Validity Scoring Specification/Procedures review rounds	30 days	Mon 7/1/13	Fri 8/9/13	Pearson
292	Reliability and Validity Scoring Specification/Procedures - CDE Review Final	5 days	Mon 8/12/13	Fri 8/16/13	CDE
293	Procedures for Unusual Responses - review rounds	30 days	Mon 7/1/13	Fri 8/9/13	Pearson
294	Procedures for Unusual Responses - CDE Review Final	5 days	Mon 8/12/13	Fri 8/16/13	CDE
295	Rescoring Specifications/Procedures review rounds	30 days	Mon 7/1/13	Fri 8/9/13	Pearson
296	Rescoring Specifications/Procedures - CDE Review Final	5 days	Mon 8/12/13	Fri 8/16/13	CDE
297	**Reporting of Data Files and Assessment Results**	**298 days**	**Mon 7/1/13**	**Wed 8/20/14**	
298	**Reporting Files - Specs**	**65 days**	**Mon 7/1/13**	**Fri 9/27/13**	
299	Reporting: Data File Layout review rounds	45 days	Mon 7/1/13	Fri 8/30/13	Pearson
300	Reporting: Score Report Shells review rounds	60 days	Mon 7/1/13	Fri 9/20/13	Pearson
301	Reporting: Individual Student Level File Layout - CDE Review Final	5 days	Mon 9/2/13	Fri 9/6/13	CDE
302	Reporting: Individual Student Level Report Shells – CDE Review Final	5 days	Mon 9/23/13	Fri 9/27/13	CDE
303	Reporting: State Level File Layouts – CDE Review Final	5 days	Mon 9/2/13	Fri 9/6/13	CDE
304	Reporting: District Level File Layouts – CDE Review Final	5 days	Mon 9/2/13	Fri 9/6/13	CDE
305	Reporting: District Level Report Shells – CDE Review Final	5 days	Mon 9/23/13	Fri 9/27/13	CDE
306	Reporting: School Level File Layouts – CDE Review Final	5 days	Mon 9/2/13	Fri 9/6/13	CDE
307	Reporting: School Level Report Shells – CDE Review Final	5 days	Mon 9/23/13	Fri 9/27/13	CDE
308	**Reports**	**75 days**	**Thu 5/8/14**	**Wed 8/20/14**	
309	Student Biographical Data Review Window	10 days	Thu 5/8/14	Wed 5/21/14	CO DISTRICTS
310	Reporting: QC of Individual Student Level File – CDE Review	2 days	Mon 7/28/14	Tue 7/29/14	CDE

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ID	Task Name	Duration	Start	Finish	Resource Names
311	Reporting: QC of Individual Student Level File – CDE Verification	0 days	Tue 7/29/14	Tue 7/29/14	CDE
312	Reporting: Individual Student Level File Posted	0 days	Tue 7/29/14	Tue 7/29/14	Pearson
313	Reporting: Individual Student Report Bellwethers	2 days	Mon 8/4/14	Tue 8/5/14	CDE
314	Reporting: Individual Student Level File Electronic Reports Posted	0 days	Tue 8/5/14	Tue 8/5/14	Pearson
315	Reporting: Individual Student Level Hard Copy Reports in District	0 days	Wed 8/20/14	Wed 8/20/14	Pearson
316	**State Level Files**	**8 days**	**Fri 7/18/14**	**Tue 7/29/14**	
317	Pearson updates scoring system and produces/verifies State Level File	6 days	Fri 7/18/14	Fri 7/25/14	Pearson
318	Reporting: QC of State Level File(s) – CDE Review	2 days	Mon 7/28/14	Tue 7/29/14	CDE
319	Reporting: QC of State Level File(s) – CDE Verification	0 days	Tue 7/29/14	Tue 7/29/14	CDE
320	Reporting: State Level File(s) Posted	0 days	Tue 7/29/14	Tue 7/29/14	Pearson
321	**District Level Files**	**10 days**	**Mon 7/28/14**	**Fri 8/8/14**	
322	Reporting: QC of District Level File(s) – CDE Review	2 days	Mon 7/28/14	Tue 7/29/14	CDE
323	Reporting: QC of District Level File(s) – CDE Verification	0 days	Tue 7/29/14	Tue 7/29/14	CDE
324	Reporting: District Level File(s) Posted	0 days	Tue 7/29/14	Tue 7/29/14	Pearson
325	Reporting: District Reports Bellwethers	2 days	Mon 8/4/14	Tue 8/5/14	CDE
326	Reporting: District Electronic Reports Posted	0 days	Fri 8/8/14	Fri 8/8/14	Pearson
327	**School Level Files**	**10 days**	**Mon 7/28/14**	**Fri 8/8/14**	
328	Reporting: QC of School Level File(s) – CDE Review	2 days	Mon 7/28/14	Tue 7/29/14	CDE
329	Reporting: QC of School Level File(s) – CDE Verification	0 days	Tue 7/29/14	Tue 7/29/14	CDE
330	Reporting: School Level File(s) Posted	0 days	Tue 7/29/14	Tue 7/29/14	Pearson
331	Reporting: School Reports Bellwethers	2 days	Mon 8/4/14	Tue 8/5/14	CDE
332	Reporting: School Electronic Reports Posted	0 days	Fri 8/8/14	Fri 8/8/14	Pearson
333	**Interpretive Guide**	**67 days**	**Mon 5/5/14**	**Tue 8/5/14**	
334	Interpretive Guide review rounds	60 days	Mon 5/5/14	Fri 7/25/14	Pearson
335	Assessment Interpretive Guide – Review Final	7 days	Mon 7/28/14	Tue 8/5/14	CDE
336	Assessment Interpretive Guide Posted	0 days	Tue 8/5/14	Tue 8/5/14	Pearson
337	**Psychometric, Research, and Technical Activities**	**294 days**	**Mon 7/1/13**	**Fri 8/15/14**	
338	**Field Test and Operational Analysis**	**253 days**	**Mon 7/1/13**	**Wed 6/18/14**	
339	Field Test- Sampling Design	60 days	Mon 7/1/13	Fri 9/20/13	Pearson
340	Psychometric Analysis of Field Test	30 days	Thu 5/8/14	Wed 6/18/14	Pearson
341	Operational Analysis	10 days	Thu 5/8/14	Wed 5/21/14	Pearson
342	Vertical Scale Presentation to TAC 1 (Reading/Math)	2 days	Tue 12/3/13	Wed 12/4/13	Pearson
343	Vertical Scale Decision - Final (Reading/Math)	0 days	Thu 5/1/14	Thu 5/1/14	Pearson
344	**Standard Setting Tasks**	**163 days**	**Tue 12/3/13**	**Thu 7/17/14**	
345	Standard Setting Presentation to TAC 1 (Reading/Math/Science)	2 days	Tue 12/3/13	Wed 12/4/13	Pearson
346	Standard Setting Procedure Decision review rounds	45 days	Mon 3/3/14	Fri 5/2/14	Pearson
347	Standard Setting Procedure Decision - Final	0 days	Fri 5/2/14	Fri 5/2/14	Pearson
348	Standard Setting Material review rounds	15 days	Thu 5/8/14	Wed 5/28/14	Pearson
349	Standard Setting Material CDE Review Final	5 days	Thu 5/29/14	Wed 6/4/14	CDE

Colorado Summative Schedule - FY2014

ID	Task Name	Duration	Start	Finish	Resource Names
350	Recruit Standard Setting Participants	20 days	Mon 5/12/14	Fri 6/6/14	Pearson
351	Standard Setting	3 days	Tue 6/10/14	Thu 6/12/14	Pearson
352	Standard Setting Validation	3 days	Tue 6/10/14	Thu 6/12/14	Pearson
353	CDE approval of Standard Setting Results -- approval to proceed with reporting	19 days	Mon 6/23/14	Thu 7/17/14	CDE
354	**Equating**	**113 days**	**Mon 7/1/13**	**Wed 12/4/13**	
355	Linking and Equating Presentation to TAC 1 (Reading/Math/Science)	2 days	Tue 12/3/13	Wed 12/4/13	Pearson
356	Alignment Studies (Reading/Math/Science)	20 days	Mon 7/1/13	Fri 7/26/13	Pearson
357	**TAC Meetings**	**112 days**	**Tue 9/3/13**	**Wed 2/5/14**	
358	TAC Meeting 1	2 days	Tue 9/3/13	Wed 9/4/13	
359	TAC Meeting 2	2 days	Tue 12/3/13	Wed 12/4/13	
360	TAC Meeting 3	2 days	Tue 2/4/14	Wed 2/5/14	
361	**Technical Reports**	**71 days**	**Thu 5/8/14**	**Fri 8/15/14**	
362	Technical Report – Final version to CDE	0 days	Fri 8/15/14	Fri 8/15/14	Pearson
363	Irregularity and Data Forensic Report	10 days	Thu 5/8/14	Wed 5/21/14	Pearson
364	**Training and Support**	**180 days**	**Mon 7/1/13**	**Fri 3/7/14**	
365	Understanding Assessment Results Training Materials review rounds	20 days	Mon 7/1/13	Fri 7/26/13	Pearson
366	Understanding Assessment Results Training Material - CDE Final Review	5 days	Mon 7/29/13	Fri 8/2/13	CDE
367	Understanding Assessment Results Training	5 days	Mon 8/26/13	Fri 8/30/13	Pearson
368	Technology Director Training Material review rounds	60 days	Mon 7/1/13	Fri 9/20/13	Pearson
369	Technology Director Training Material CDE Review Final	5 days	Mon 9/23/13	Fri 9/27/13	CDE
370	Conduct Technology Director Training	5 days	Mon 2/3/14	Fri 2/7/14	Pearson
371	Assessment Administration Training Material review rounds	30 days	Thu 1/2/14	Wed 2/12/14	Pearson
372	Assessment Administration Training Material CDE Review Final	5 days	Thu 2/13/14	Wed 2/19/14	CDE
373	Conduct Assessment Administration Training	5 days	Mon 3/3/14	Fri 3/7/14	Pearson
374	**Customer Service**	**260 days**	**Mon 7/1/13**	**Mon 6/30/14**	
375	Customer feedback survey	0 days	Mon 6/30/14	Mon 6/30/14	Pearson
376	Establish DAC Website - Updates	20 days	Mon 7/1/13	Fri 7/26/13	Pearson

Colorado Summative Schedule - FY2015

ID	Task Name	Duration	Start	Finish	Resource Names
0	**CO Summative - FY2015**	**587 days**	**Mon 6/2/14**	**Wed 8/31/16**	
1	**START**	**587 days**	**Mon 6/2/14**	**Wed 8/31/16**	
2	**General**	**5 days**	**Tue 7/1/14**	**Mon 7/7/14**	
3	Security Plan updated and rebaselined	5 days	Tue 7/1/14	Mon 7/7/14	Pearson
4	**Program Management**	**304 days**	**Tue 7/1/14**	**Mon 8/31/15**	
5	**Project Schedule**	**9 days**	**Tue 7/1/14**	**Fri 7/11/14**	
6	Draft Project Schedule Created	4 days	Tue 7/1/14	Fri 7/4/14	Pearson/ETS
7	Project Schedule - CDE Review	3 days	Mon 7/7/14	Wed 7/9/14	CDE
8	Project Schedule - CDE and Pearson Joint Review	1 day	Thu 7/10/14	Thu 7/10/14	Pearson/ETS/CDE
9	Project Schedule Updated and Baselined	1 day	Fri 7/11/14	Fri 7/11/14	Pearson
10	**Project Meetings**	**232 days**	**Tue 7/1/14**	**Wed 5/20/15**	
11	**Project Meeting 1**	**12 days**	**Tue 7/1/14**	**Wed 7/16/14**	
12	Agenda Drafted and Delivered to CDE	2 days	Tue 7/1/14	Wed 7/2/14	Pearson
13	Meeting held (Denver, CO)	2 days	Tue 7/8/14	Wed 7/9/14	
14	Meeting Minutes Distributed	5 days	Thu 7/10/14	Wed 7/16/14	Pearson
15	**Project Meeting 2**	**13 days**	**Mon 9/1/14**	**Wed 9/17/14**	
16	Agenda Drafted and Delivered to CDE	2 days	Mon 9/1/14	Tue 9/2/14	Pearson
17	Meeting held (Denver, CO)	2 days	Tue 9/9/14	Wed 9/10/14	
18	Meeting Minutes Distributed	5 days	Thu 9/11/14	Wed 9/17/14	Pearson
19	**Project Meeting 3 - In person**	**13 days**	**Mon 11/3/14**	**Wed 11/19/14**	
20	Agenda Drafted and Delivered to CDE	2 days	Mon 11/3/14	Tue 11/4/14	Pearson
21	Meeting held (San Antonio, TX)	2 days	Tue 11/11/14	Wed 11/12/14	
22	Meeting Minutes Distributed	5 days	Thu 11/13/14	Wed 11/19/14	Pearson
23	**Project Meeting 4**	**14 days**	**Fri 1/2/15**	**Wed 1/21/15**	
24	Agenda Drafted and Delivered to CDE	2 days	Fri 1/2/15	Mon 1/5/15	Pearson
25	Meeting held (Denver, CO)	2 days	Tue 1/13/15	Wed 1/14/15	
26	Meeting Minutes Distributed	5 days	Thu 1/15/15	Wed 1/21/15	Pearson
27	**Project Meeting 5**	**13 days**	**Mon 3/2/15**	**Wed 3/18/15**	
28	Agenda Drafted and Delivered to CDE	2 days	Mon 3/2/15	Tue 3/3/15	Pearson
29	Meeting held (Denver, CO)	2 days	Tue 3/10/15	Wed 3/11/15	
30	Meeting Minutes Distributed	5 days	Thu 3/12/15	Wed 3/18/15	Pearson
31	**Project Meeting 6 - In person**	**14 days**	**Fri 5/1/15**	**Wed 5/20/15**	
32	Agenda Drafted and Delivered to CDE	2 days	Fri 5/1/15	Mon 5/4/15	Pearson
33	Meeting held (San Antonio, TX)	2 days	Tue 5/12/15	Wed 5/13/15	
34	Meeting Minutes Distributed	5 days	Thu 5/14/15	Wed 5/20/15	Pearson
35	**Monthy Reports**	**239 days**	**Tue 8/5/14**	**Mon 7/6/15**	
36	Jul	0 days	Tue 8/5/14	Tue 8/5/14	Pearson
37	Aug	0 days	Wed 9/3/14	Wed 9/3/14	Pearson
38	Sep	0 days	Fri 10/3/14	Fri 10/3/14	Pearson

Colorado Summative Schedule - FY2015

ID	Task Name	Duration	Start	Finish	Resource Names
39	Oct	0 days	Wed 11/5/14	Wed 11/5/14	Pearson
40	Nov	0 days	Wed 12/3/14	Wed 12/3/14	Pearson
41	Dec	0 days	Tue 1/6/15	Tue 1/6/15	Pearson
42	Jan	0 days	Wed 2/4/15	Wed 2/4/15	Pearson
43	Feb	0 days	Wed 3/4/15	Wed 3/4/15	Pearson
44	Mar	0 days	Fri 4/3/15	Fri 4/3/15	Pearson
45	Apr	0 days	Tue 5/5/15	Tue 5/5/15	Pearson
46	May	0 days	Wed 6/3/15	Wed 6/3/15	Pearson
47	Jun	0 days	Mon 7/6/15	Mon 7/6/15	Pearson
48	**DAC**	**108 days**	**Tue 10/21/14**	**Thu 3/19/15**	
49	DAC Academy	2 days	Wed 2/18/15	Thu 2/19/15	Pearson
50	DAC Management 1	2 days	Tue 10/21/14	Wed 10/22/14	Pearson
51	DAC Management 2	2 days	Wed 3/18/15	Thu 3/19/15	Pearson
52	**Program Improvement**	**261 days**	**Mon 7/21/14**	**Mon 7/20/15**	
53	Program Improvement Plan - Development	15 days	Wed 12/31/14	Tue 1/20/15	Pearson
54	Program Improvement Plan - Production	15 days	Wed 2/4/15	Tue 2/24/15	Pearson
55	Program Improvement Plan - Shipping and Receipt	15 days	Mon 3/9/15	Fri 3/27/15	Pearson
56	Program Improvement Plan - Administration	15 days	Mon 4/27/15	Fri 5/15/15	Pearson
57	Program Improvement Plan - Scanning	15 days	Mon 7/21/14	Fri 8/8/14	Pearson
58	Program Improvement Plan - Scoring	15 days	Fri 6/26/15	Thu 7/16/15	Pearson
59	Program Improvement Plan - Data Processing	15 days	Tue 6/30/15	Mon 7/20/15	Pearson
60	Program Improvement Plan - Reporting and Psychometrics	15 days	Mon 9/1/14	Fri 9/19/14	Pearson
61	Program Improvement Plan - Meetings	15 days	Fri 9/12/14	Thu 10/2/14	Pearson
62	**Invoices**	**239 days**	**Tue 9/30/14**	**Mon 8/31/15**	
63	Invoice Q1	0 days	Tue 9/30/14	Tue 9/30/14	Pearson
64	Invoice Q2	0 days	Wed 12/31/14	Wed 12/31/14	Pearson
65	Invoice Q3	0 days	Tue 3/31/15	Tue 3/31/15	Pearson
66	Invoice Q4	0 days	Mon 6/15/15	Mon 6/15/15	Pearson
67	Invoice - "tail"	0 days	Mon 8/31/15	Mon 8/31/15	Pearson
68	**Assessment Development**	**309 days**	**Mon 6/2/14**	**Thu 8/6/15**	
69	**Documents - Development Specs**	**0 days**	**Tue 7/1/14**	**Tue 7/1/14**	
70	Eligible Content Document - Final	0 days	Tue 7/1/14	Tue 7/1/14	ETS
71	Claims Document - Final	0 days	Tue 7/1/14	Tue 7/1/14	ETS
72	Reporting Categories Document - Final	0 days	Tue 7/1/14	Tue 7/1/14	ETS
73	Assessment Framework - Final	0 days	Tue 7/1/14	Tue 7/1/14	ETS
74	Performance Level Descriptors – General - Final	0 days	Tue 7/1/14	Tue 7/1/14	ETS
75	Performance Level Descriptors – Grade Level Specific - Final	0 days	Tue 7/1/14	Tue 7/1/14	ETS
76	Test Blueprints/Specifications - Final	0 days	Tue 7/1/14	Tue 7/1/14	ETS
77	**Style Guide**	**30 days**	**Tue 7/1/14**	**Mon 8/11/14**	

Colorado Summative Schedule - FY2015

ID	Task Name	Duration	Start	Finish	Resource Names
78	Colorado Style Guide - Draft	30 days	Tue 7/1/14	Mon 8/11/14	ETS/CDE
79	Colorado Style Guide - Final for year	0 days	Tue 7/1/14	Tue 7/1/14	ETS
80	**PE Stimuli and Storyboards**	**119 days**	**Mon 9/15/14**	**Thu 2/26/15**	
81	Recruit PE Stimuli and Storyboard Reviewers	25 days	Mon 1/5/15	Fri 2/6/15	Pearson
82	PE Stimuli and Storyboard Develoment	81 days	Mon 9/15/14	Mon 1/5/15	ETS
83	PE Stimuli and Storyboard Selection - CDE Review	10 days	Tue 1/6/15	Mon 1/19/15	CDE
84	Prepare PE Stimuli and Storyboard Review Training Meeting materials	5 days	Tue 1/20/15	Mon 1/26/15	ETS
85	PE Stimuli and Storyboard Review Training Meeting Materials- CDE Review	5 days	Tue 1/27/15	Mon 2/2/15	CDE
86	Edit and ship materials after CDE review	10 days	Tue 2/3/15	Mon 2/16/15	ETS
87	PE Stimuli and Storyboard Review	3 days	Tue 2/17/15	Thu 2/19/15	ETS
88	ETS sends final results of PE Stimuli and Storyboard Review meeting to CDE	5 days	Fri 2/20/15	Thu 2/26/15	ETS
89	**Item Development (Spring 2016 Field Test)**	**288 days**	**Tue 7/1/14**	**Thu 8/6/15**	
90	Item Writer Recruiting	25 days	Mon 2/2/15	Fri 3/6/15	Pearson
91	Develop Training Materials and Item Development Plans	5 days	Wed 2/25/15	Tue 3/3/15	ETS
92	Item Development Meeting 1 Materials – CDE Review	5 days	Wed 3/4/15	Tue 3/10/15	CDE
93	Edit and ship materials after CDE review	9 days	Wed 3/11/15	Mon 3/23/15	ETS
94	Item Development Meeting 1	3 days	Tue 3/24/15	Thu 3/26/15	ETS
95	ETS provides developers feedback	39 days	Fri 3/27/15	Wed 5/20/15	ETS
96	ETS develops training materials and item development plans (meeting 2)	5 days	Tue 7/1/14	Mon 7/7/14	ETS
97	Item Writer Recruiting	25 days	Fri 5/1/15	Thu 6/4/15	Pearson
98	Item Development Meeting 2 Materials – CDE Review	3 days	Thu 5/28/15	Mon 6/1/15	CDE
99	Edit and ship materials after CDE review	10 days	Tue 6/2/15	Mon 6/15/15	ETS
100	Item Development Meeting 2	3 days	Tue 6/16/15	Thu 6/18/15	ETS
101	ETS provides developers feedback	10 days	Fri 6/19/15	Thu 7/2/15	ETS
102	ETS conducts internal Content and Editorial Reviews	20 days	Fri 7/3/15	Thu 7/30/15	ETS
103	Item Review – CDE Review	5 days	Fri 7/31/15	Thu 8/6/15	CDE
104	**Content Review - Science, Social Studies**	**61 days**	**Thu 6/19/14**	**Thu 9/11/14**	
105	Item Review – CDE Review (newly written items)	5 days	Tue 7/1/14	Mon 7/7/14	CDE
106	Recruit Content Review Participants	10 days	Tue 7/1/14	Mon 7/14/14	Pearson
107	ETS Creates training materials for Content and PLD Meetings	10 days	Thu 6/19/14	Wed 7/2/14	ETS
108	Content and PLD Meeting training Materials – CDE Review	5 days	Thu 7/3/14	Wed 7/9/14	CDE
109	Edit and ship materials after CDE review	13 days	Thu 7/10/14	Mon 7/28/14	ETS
110	Content and PLD Meeting	3 days	Tue 7/29/14	Thu 7/31/14	ETS
111	ETS implements edits suggested by committee	30 days	Fri 8/1/14	Thu 9/11/14	ETS
112	ETS sends final results of Content and Bias Sensitivity Review meeting	1 day	Thu 8/7/14	Thu 8/7/14	ETS
113	**Bias and Sensitivity Review**	**62 days**	**Thu 6/19/14**	**Fri 9/12/14**	
114	Recruit Content Review Participants	10 days	Tue 7/1/14	Mon 7/14/14	Pearson
115	ETS creates training materials for Bias and sensitivity Reviews	10 days	Thu 6/19/14	Wed 7/2/14	ETS
116	Bias and Sensitivity Review training materials – CDE Review	5 days	Thu 7/3/14	Wed 7/9/14	CDE

Colorado Summative Schedule - FY2015

ID	Task Name	Duration	Start	Finish	Resource Names
117	Edit and ship materials after CDE review	13 days	Thu 7/10/14	Mon 7/28/14	ETS
118	Bias and Sensitivity Review Meeting	1 day	Fri 8/1/14	Fri 8/1/14	ETS
119	ETS implements edits suggested by committee	30 days	Mon 8/4/14	Fri 9/12/14	ETS
120	ETS sends final results of Content and Bias Sensitivity Review meeting	1 day	Thu 8/7/14	Thu 8/7/14	ETS
121	**Data Review (for Spring 2015 Operational)**	**32 days**	**Mon 6/2/14**	**Tue 7/15/14**	
122	Recruit Data Review Participants	25 days	Mon 6/2/14	Fri 7/4/14	Pearson
123	ETS Prints Data Review Training Materials	5 days	Wed 6/11/14	Tue 6/17/14	ETS
124	Produce Data Review Training Materials – CDE Review	4 days	Wed 6/18/14	Mon 6/23/14	CDE
125	Edit and ship materials after CDE review	10 days	Tue 6/24/14	Mon 7/7/14	ETS
126	Conduct Data Review meeting	1 day	Tue 7/8/14	Tue 7/8/14	ETS
127	ETS implements edits suggested by committee	10 days	Tue 7/1/14	Mon 7/14/14	ETS
128	ETS provides final results of Data Review Meetings	1 day	Tue 7/15/14	Tue 7/15/14	ETS
129	**Form Development (Spring 2015 Operational)**	**141 days**	**Tue 7/1/14**	**Tue 1/13/15**	
130	Field Testing Plan	20 days	Tue 7/1/14	Mon 7/28/14	Pearson
131	**Core Test Form Development (Science, Social Studies)**	**55 days**	**Wed 7/16/14**	**Tue 9/30/14**	
132	ETS constructs forms	40 days	Wed 7/16/14	Tue 9/9/14	ETS
133	CDE reviews forms	5 days	Wed 9/10/14	Tue 9/16/14	CDE
134	ETS revises forms based on CDE review	5 days	Wed 9/17/14	Tue 9/23/14	ETS
135	Core Test Form Development – CDE Review Final	5 days	Wed 9/24/14	Tue 9/30/14	CDE
136	Core Test Form Development – Final	0 days	Tue 9/30/14	Tue 9/30/14	CDE
137	**Embedded Field Test Form Development**	**65 days**	**Wed 10/1/14**	**Tue 12/30/14**	
138	ETS constructs forms	50 days	Wed 10/1/14	Tue 12/9/14	ETS
139	CDE reviews forms	5 days	Wed 12/10/14	Tue 12/16/14	CDE
140	ETS revises forms based on CDE review	5 days	Wed 12/17/14	Tue 12/23/14	ETS
141	Embedded Field Test Form Development – Final	5 days	Wed 12/24/14	Tue 12/30/14	CDE
142	ETS sends Production ready files to Pearson (Files to Print)	0 days	Tue 12/30/14	Tue 12/30/14	ETS
143	**Special Populations**	**65 days**	**Tue 7/1/14**	**Mon 9/29/14**	
144	Accommodations Procedures Manual review rounds	60 days	Tue 7/1/14	Mon 9/22/14	Pearson
145	Accommodations Procedures Manual - CDE Review Final	5 days	Tue 9/23/14	Mon 9/29/14	CDE
146	**Teacher Read Directions**	**50 days**	**Wed 10/1/14**	**Tue 12/9/14**	
147	ETS constructs directions	35 days	Wed 10/1/14	Tue 11/18/14	ETS
148	CDE reviews directions	5 days	Wed 11/19/14	Tue 11/25/14	CDE
149	ETS revises forms based on CDE review	5 days	Wed 11/26/14	Tue 12/2/14	ETS
150	Accommodated Materials: Teacher Read Directions – CDE Review Final	5 days	Wed 12/3/14	Tue 12/9/14	CDE
151	ETS sends Production ready files to Pearson	0 days	Tue 12/9/14	Tue 12/9/14	ETS
152	**Certification for District Translators**	**65 days**	**Tue 7/1/14**	**Mon 9/29/14**	
153	Procedures documente produced	60 days	Tue 7/1/14	Mon 9/22/14	Pearson
154	Procedures for Certification for District Translators – CDE Review Final	5 days	Tue 9/23/14	Mon 9/29/14	CDE
155	**Test/Ancillary Material - Development**	**141 days**	**Tue 7/1/14**	**Tue 1/13/15**	

ID	Task Name	Duration	Start	Finish	Resource Names
156	District and School Assessment Coordinator review rounds	60 days	Tue 7/1/14	Mon 9/22/14	Pearson
157	Document Development: District and School Assessment Coordinators Manual – CDE Review Final	5 days	Tue 9/23/14	Mon 9/29/14	CDE
158	Proctors Manual review rounds	30 days	Mon 11/17/14	Fri 12/26/14	Pearson
159	Document Development: Proctors Manual – CDE Review Final	5 days	Mon 12/29/14	Fri 1/2/15	CDE
160	Certification Forms review rounds	60 days	Tue 7/1/14	Mon 9/22/14	Pearson
161	Document Development: Certification Forms – CDE Review Final	5 days	Tue 9/23/14	Mon 9/29/14	CDE
162	Answer Document review rounds	45 days	Tue 7/1/14	Mon 9/1/14	Pearson
163	Document Development: Answer Document Layout - CDE Review Final	5 days	Tue 9/2/14	Mon 9/8/14	CDE
164	Document Development: Test Booklets/Answer Documents – CDE Review Final	5 days	Wed 1/7/15	Tue 1/13/15	CDE
165	Ancillary Materials (Manipulatives) review rounds	60 days	Tue 7/1/14	Mon 9/22/14	Pearson
166	Document Development: Ancillary Materials – CDE Review Final	5 days	Tue 9/23/14	Mon 9/29/14	CDE
167	**Assessment Administration**	**566 days**	**Tue 7/1/14**	**Wed 8/31/16**	
168	**Orders for Materials**	**45 days**	**Mon 2/2/15**	**Fri 4/3/15**	
169	Pre-ID File Transfer	0 days	Mon 2/2/15	Mon 2/2/15	CDE
170	Materials Ordering System Operational	0 days	Mon 2/2/15	Mon 2/2/15	Pearson
171	Materials Ordering Window	20 days	Mon 2/2/15	Fri 2/27/15	Pearson
172	Online Rosters Generated	5 days	Mon 3/2/15	Fri 3/6/15	Pearson
173	Additional Materials Ordering Window	10 days	Mon 3/23/15	Fri 4/3/15	Pearson
174	**Test/Ancillary Material - Production**	**156 days**	**Tue 7/1/14**	**Tue 2/3/15**	
175	Proctors Manual Produced	15 days	Mon 1/5/15	Fri 1/23/15	Pearson
176	Test Booklets/Answer Documents Produced	25 days	Wed 12/31/14	Tue 2/3/15	Pearson
177	Ancillaries Produced	15 days	Tue 9/30/14	Mon 10/20/14	Pearson
178	Accommodated Materials Produced	25 days	Tue 7/1/14	Mon 8/4/14	Pearson
179	Certification Forms Produced	5 days	Tue 9/30/14	Mon 10/6/14	Pearson
180	**Packaging and Delivery**	**46 days**	**Fri 1/2/15**	**Fri 3/6/15**	
181	Colorado Districts in Shipping System	0 days	Mon 2/2/15	Mon 2/2/15	Pearson
182	Packaging Specifications Finalized	0 days	Fri 1/2/15	Fri 1/2/15	Pearson
183	Non-secure Materials Packaged	20 days	Wed 2/4/15	Tue 3/3/15	Pearson
184	Non-secure Materials Shipped	3 days	Wed 3/4/15	Fri 3/6/15	Pearson
185	Non-secure Materials in District	0 days	Fri 3/6/15	Fri 3/6/15	Pearson
186	Secure Materials Packaged	20 days	Wed 2/4/15	Tue 3/3/15	Pearson
187	Secure Materials Shipped	3 days	Wed 3/4/15	Fri 3/6/15	Pearson
188	Secure Materials in District	0 days	Fri 3/6/15	Fri 3/6/15	Pearson
189	**Test Administration**	**15 days**	**Mon 4/6/15**	**Fri 4/24/15**	
190	Operational Test Administration Window - Science, Social Studies	15 days	Mon 4/6/15	Fri 4/24/15	
191	**Material Return and Verification**	**566 days**	**Tue 7/1/14**	**Wed 8/31/16**	
192	To Be Scored Materials Return EARLY Shipment	0 days	Tue 7/1/14	Tue 7/1/14	Pearson
193	To Be Scored Materials Return Shipment	0 days	Tue 7/1/14	Tue 7/1/14	Pearson
194	Not To Be Scored Materials Return Shipment	0 days	Tue 7/1/14	Tue 7/1/14	Pearson

Colorado Summative Schedule - FY2015

ID	Task Name	Duration	Start	Finish	Resource Names
195	Non-scored Materials Destruction	0 days	Wed 3/2/16	Wed 3/2/16	Pearson
196	Scored Materials Destruction	0 days	Wed 8/31/16	Wed 8/31/16	Pearson
197	Secure Materials Verification – Initial Report	0 days	Mon 7/14/14	Mon 7/14/14	Pearson
198	Secure Materials Verification – Weekly Report	0 days	Mon 7/21/14	Mon 7/21/14	Pearson
199	Secure Materials Verification – Final Report	0 days	Mon 7/28/14	Mon 7/28/14	Pearson
200	**Test Monitoring**	**163 days**	**Tue 7/1/14**	**Fri 2/13/15**	
201	Test Monitoring Protocol review rounds	60 days	Tue 7/1/14	Mon 9/22/14	Pearson
202	Test Monitoring Protocol – CDE Review Final	5 days	Tue 9/23/14	Mon 9/29/14	CDE
203	Test Monitoring Sites Selected	0 days	Thu 1/15/15	Thu 1/15/15	Pearson
204	Test Monitoring Sites Notified – TBD if needed	0 days	Fri 2/13/15	Fri 2/13/15	Pearson
205	Test Monitoring	15 days	Tue 7/1/14	Mon 7/21/14	Pearson
206	**Web-Based Online Test Delivery System**	**174 days**	**Tue 7/1/14**	**Mon 3/2/15**	
207	**Online Readiness Assessment**	**20 days**	**Wed 9/17/14**	**Tue 10/14/14**	
208	Conduct the Online Readiness Assessment	5 days	Wed 9/17/14	Tue 9/23/14	Pearson
209	Online Readiness Assessment Results	5 days	Wed 9/24/14	Tue 9/30/14	Pearson
210	Infrastructure Plan - Final	10 days	Wed 10/1/14	Tue 10/14/14	Pearson
211	**Online Tutorials**	**174 days**	**Tue 7/1/14**	**Mon 3/2/15**	
212	Online Tutorials review rounds	30 days	Fri 1/2/15	Thu 2/12/15	Pearson
213	Online Tutorials – CDE Review Final	5 days	Fri 2/13/15	Thu 2/19/15	CDE
214	Online Tutorials Available for District Use	0 days	Mon 3/2/15	Mon 3/2/15	Pearson
215	Online Accommodations Functionality document review rounds	60 days	Tue 7/1/14	Mon 9/22/14	Pearson
216	Online Accommodations Functionality – CDE Review Final	5 days	Tue 9/23/14	Mon 9/29/14	CDE
217	**Online Test Delivery**	**160 days**	**Tue 7/1/14**	**Mon 2/9/15**	
218	Online Test Delivery System Demonstration	0 days	Fri 8/1/14	Fri 8/1/14	Pearson
219	Online Test Delivery System Testing	80 days	Fri 8/1/14	Thu 11/20/14	Pearson
220	Online Test Delivery System Available for District Installation/Download	0 days	Thu 11/20/14	Thu 11/20/14	Pearson
221	Forms Loaded in Online Test Delivery System	10 days	Wed 12/31/14	Tue 1/13/15	Pearson
222	Mitigation and Contingency Plans - Final	30 days	Tue 7/1/14	Mon 8/11/14	Pearson
223	Establish Unique Log-in ID and Passwords (CDE staff, technology directors, DACs, SACs, test proctors, students)	5 days	Mon 2/2/15	Fri 2/6/15	Pearson
224	Distribute Unique Log-in ID and Passowrds (CDE staff, technology directors, DACs, SACs, test proctors, students)	1 day	Mon 2/9/15	Mon 2/9/15	Pearson
225	**Scanning and Scoring**	**260 days**	**Tue 7/1/14**	**Mon 6/29/15**	
226	**Anchor Validation (Spring 2014 Field Test)**	**84 days**	**Mon 8/18/14**	**Thu 12/11/14**	
227	Recruit Anchor Validation Participants	20 days	Mon 8/18/14	Fri 9/12/14	Pearson
228	Anchor Validation Meeting	3 days	Tue 9/30/14	Thu 10/2/14	Pearson
229	Scoring Decision Guide review rounds	45 days	Fri 10/3/14	Thu 12/4/14	Pearson
230	Scoring Decision Guide – CDE Review Final	5 days	Fri 12/5/14	Thu 12/11/14	CDE
231	**Scoring Processes**	**260 days**	**Tue 7/1/14**	**Mon 6/29/15**	
232	Scanning Specifications review rounds	20 days	Tue 7/1/14	Mon 7/28/14	Pearson

Colorado Summative Schedule - FY2015

ID	Task Name	Duration	Start	Finish	Resource Names
233	Scanning Specifications – CDE Review Final	5 days	Tue 7/29/14	Mon 8/4/14	CDE
234	Materials Scanned	10 days	Mon 7/7/14	Fri 7/18/14	Pearson
235	Key Verification – CDE Review	2 days	Fri 5/1/15	Mon 5/4/15	CDE
236	Alerts Resolved and Clean Post	10 days	Mon 7/7/14	Fri 7/18/14	Pearson
237	Operational Scoring Window	7 days	Fri 7/11/14	Mon 7/21/14	
238	**Rangefinding**	**29 days**	**Mon 4/20/15**	**Thu 5/28/15**	
239	Recruit Rangefinding Participants	20 days	Mon 4/20/15	Fri 5/15/15	Pearson
240	Rangefinding Meeting	3 days	Tue 5/26/15	Thu 5/28/15	Pearson
241	Scoring Staff Requirements Established	0 days	Tue 7/1/14	Tue 7/1/14	Pearson
242	Scoring Staff Recruitment and Hiring	20 days	Wed 4/1/15	Tue 4/28/15	Pearson
243	Scoring Training Materials review rounds	10 days	Fri 5/29/15	Thu 6/11/15	Pearson
244	Scoring Training Materials – CDE Review Final	3 days	Fri 6/12/15	Tue 6/16/15	CDE
245	Scoring Window	7 days	Wed 6/17/15	Thu 6/25/15	Pearson
246	Scoring Site Scheduled Visit - CDE	2 days	Fri 6/26/15	Mon 6/29/15	CDE
247	Reliability and Validity Scoring Specification/Procedures review rounds	30 days	Tue 7/1/14	Mon 8/11/14	Pearson
248	Reliability and Validity Scoring Specification/Procedures - CDE Review Final	5 days	Tue 8/12/14	Mon 8/18/14	CDE
249	Procedures for Unusual Responses - review rounds	30 days	Tue 7/1/14	Mon 8/11/14	Pearson
250	Procedures for Unusual Responses - CDE Review Final	5 days	Tue 8/12/14	Mon 8/18/14	CDE
251	Rescoring Specifications/Procedures review rounds	30 days	Tue 7/1/14	Mon 8/11/14	Pearson
252	Rescoring Specifications/Procedures - CDE Review Final	5 days	Tue 8/12/14	Mon 8/18/14	CDE
253	**Reporting of Data Files and Assessment Results**	**65 days**	**Tue 7/1/14**	**Mon 9/29/14**	
254	**Reporting Files - Specs**	**65 days**	**Tue 7/1/14**	**Mon 9/29/14**	
255	Reporting: Data File Layout review rounds	45 days	Tue 7/1/14	Mon 9/1/14	Pearson
256	Reporting: Score Report Shells review rounds	60 days	Tue 7/1/14	Mon 9/22/14	Pearson
257	Reporting: Individual Student Level File Layout - CDE Review Final	5 days	Tue 9/2/14	Mon 9/8/14	CDE
258	Reporting: Individual Student Level Report Shells – CDE Review Final	5 days	Tue 9/23/14	Mon 9/29/14	CDE
259	Reporting: State Level File Layouts – CDE Review Final	5 days	Tue 9/2/14	Mon 9/8/14	CDE
260	Reporting: District Level File Layouts – CDE Review Final	5 days	Tue 9/2/14	Mon 9/8/14	CDE
261	Reporting: District Level Report Shells – CDE Review Final	5 days	Tue 9/23/14	Mon 9/29/14	CDE
262	Reporting: School Level File Layouts – CDE Review Final	5 days	Tue 9/2/14	Mon 9/8/14	CDE
263	Reporting: School Level Report Shells – CDE Review Final	5 days	Tue 9/23/14	Mon 9/29/14	CDE
264	**Reports**	**30 days**	**Mon 7/21/14**	**Fri 8/29/14**	
265	Student Biographical Data Review Window	10 days	Mon 7/21/14	Fri 8/1/14	
266	**Operational Reporting - Science, Social Studies**	**16 days**	**Fri 8/8/14**	**Fri 8/29/14**	
267	Reporting: QC of Individual Student Level File – CDE Review	1 day	Fri 8/8/14	Fri 8/8/14	CDE
268	Reporting: QC of Individual Student Level File – CDE Verification	0 days	Fri 8/8/14	Fri 8/8/14	CDE
269	Reporting: Individual Student Level File Posted	0 days	Fri 8/8/14	Fri 8/8/14	Pearson
270	Reporting: Individual Student Report Bellwethers	2 days	Thu 8/14/14	Fri 8/15/14	CDE
271	Reporting: Individual Student Level File Electronic Reports Posted	0 days	Wed 8/20/14	Wed 8/20/14	Pearson

Colorado Summative Schedule - FY2015

ID	Task Name	Duration	Start	Finish	Resource Names
272	Reporting: Individual Student Level Hard Copy Reports in District	0 days	Fri 8/29/14	Fri 8/29/14	Pearson
273	**State Level Files**	**8 days**	**Tue 7/1/14**	**Thu 7/10/14**	
274	Pearson updates scoring system and produces/verifies State Level File	6 days	Tue 7/1/14	Tue 7/8/14	Pearson
275	Reporting: QC of State Level File(s) – CDE Review	2 days	Wed 7/9/14	Thu 7/10/14	CDE
276	Reporting: QC of State Level File(s) – CDE Verification	0 days	Thu 7/10/14	Thu 7/10/14	CDE
277	Reporting: State Level File(s) Posted	0 days	Thu 7/10/14	Thu 7/10/14	Pearson
278	**District Level Files**	**10 days**	**Wed 7/9/14**	**Tue 7/22/14**	
279	Reporting: QC of District Level File(s) – CDE Review	2 days	Wed 7/9/14	Thu 7/10/14	CDE
280	Reporting: QC of District Level File(s) – CDE Verification	0 days	Thu 7/10/14	Thu 7/10/14	CDE
281	Reporting: District Level File(s) Posted	0 days	Thu 7/10/14	Thu 7/10/14	Pearson
282	Reporting: District Reports Bellwethers	2 days	Wed 7/16/14	Thu 7/17/14	CDE
283	Reporting: District Electronic Reports Posted	0 days	Tue 7/22/14	Tue 7/22/14	Pearson
284	**School Level Files**	**10 days**	**Wed 7/9/14**	**Tue 7/22/14**	
285	Reporting: QC of School Level File(s) – CDE Review	2 days	Wed 7/9/14	Thu 7/10/14	CDE
286	Reporting: QC of School Level File(s) – CDE Verification	0 days	Thu 7/10/14	Thu 7/10/14	CDE
287	Reporting: School Level File(s) Posted	0 days	Thu 7/10/14	Thu 7/10/14	Pearson
288	Reporting: School Reports Bellwethers	2 days	Wed 7/16/14	Thu 7/17/14	CDE
289	Reporting: School Electronic Reports Posted	0 days	Tue 7/22/14	Tue 7/22/14	Pearson
290	**Interpretive Guide**	**65 days**	**Tue 7/1/14**	**Mon 9/29/14**	
291	Interpretive Guide review rounds	60 days	Tue 7/1/14	Mon 9/22/14	Pearson
292	Assessment Interpretive Guide – Review Final	5 days	Tue 9/23/14	Mon 9/29/14	CDE
293	Assessment Interpretive Guide Posted	0 days	Mon 9/29/14	Mon 9/29/14	Pearson
294	**Psychometric, Research, and Technical Activities**	**293 days**	**Tue 7/1/14**	**Fri 8/14/15**	
295	**Field Test and Operational Analysis**	**60 days**	**Tue 7/1/14**	**Mon 9/22/14**	
296	Field Test- Sampling Design	60 days	Tue 7/1/14	Mon 9/22/14	Pearson
297	Psychometric Analysis of Field Test	30 days	Mon 7/21/14	Fri 8/29/14	Pearson
298	Operational Analysis	9 days	Fri 7/11/14	Wed 7/23/14	Pearson
299	CDE Review and Approval of Equating Results	1 day	Thu 7/24/14	Thu 7/24/14	CDE
300	**TAC Meetings**	**112 days**	**Tue 9/2/14**	**Wed 2/4/15**	
301	TAC Meeting 1	2 days	Tue 9/2/14	Wed 9/3/14	Pearson
302	TAC Meeting 2	2 days	Tue 12/2/14	Wed 12/3/14	Pearson
303	TAC Meeting 3	2 days	Tue 2/3/15	Wed 2/4/15	Pearson
304	**Technical Reports**	**279 days**	**Mon 7/21/14**	**Fri 8/14/15**	
305	Technical Report – Final version to CDE	0 days	Fri 8/14/15	Fri 8/14/15	Pearson
306	Irregularity and Data Forensic Report	10 days	Mon 7/21/14	Fri 8/1/14	Pearson
307	**Training and Support**	**179 days**	**Tue 7/1/14**	**Fri 3/6/15**	
308	Understanding Assessment Results Training Materials review rounds	20 days	Tue 7/1/14	Mon 7/28/14	Pearson
309	Understanding Assessment Results Training Material - CDE Final Review	5 days	Tue 7/29/14	Mon 8/4/14	CDE
310	Understanding Assessment Results Training	5 days	Mon 8/25/14	Fri 8/29/14	Pearson

ID	Task Name	Duration	Start	Finish	Resource Names
311	Technology Director Training Material review rounds	60 days	Tue 7/1/14	Mon 9/22/14	Pearson
312	Technology Director Training Material CDE Review Final	5 days	Tue 9/23/14	Mon 9/29/14	CDE
313	Conduct Technology Director Training	5 days	Mon 2/2/15	Fri 2/6/15	Pearson
314	Assessment Administration Training Material review rounds	30 days	Fri 1/2/15	Thu 2/12/15	Pearson
315	Assessment Administration Training Material CDE Review Final	5 days	Fri 2/13/15	Thu 2/19/15	CDE
316	Conduct Assessment Administration Training	5 days	Mon 3/2/15	Fri 3/6/15	Pearson
317	**Customer Service**	**260 days**	**Tue 7/1/14**	**Tue 6/30/15**	
318	Customer feedback survey	0 days	Tue 6/30/15	Tue 6/30/15	Pearson
319	Establish DAC Website	20 days	Tue 7/1/14	Mon 7/28/14	Pearson

Colorado Summative Schedule - FY2016

ID	Task Name	Duration	Start	Finish	Resource Names
0	**CO Summative - FY2016**	**588 days**	**Mon 6/1/15**	**Thu 8/31/17**	
1	**START**	**588 days**	**Mon 6/1/15**	**Thu 8/31/17**	
2	**General**	**5 days**	**Wed 7/1/15**	**Tue 7/7/15**	
3	Security Plan updated and rebaselined	5 days	Wed 7/1/15	Tue 7/7/15	Pearson
4	**Program Management**	**305 days**	**Wed 7/1/15**	**Wed 8/31/16**	
5	**Project Schedule**	**9 days**	**Wed 7/1/15**	**Mon 7/13/15**	
6	Draft Project Schedule Created	4 days	Wed 7/1/15	Mon 7/6/15	Pearson/ETS
7	Project Schedule - CDE Review	3 days	Tue 7/7/15	Thu 7/9/15	CDE
8	Project Schedule - CDE and Pearson Joint Review	1 day	Fri 7/10/15	Fri 7/10/15	Pearson/ETS/CDE
9	Project Schedule Updated and Baselined	1 day	Mon 7/13/15	Mon 7/13/15	Pearson
10	**Project Meetings**	**231 days**	**Wed 7/1/15**	**Wed 5/18/16**	
11	**Project Meeting 1**	**16 days**	**Wed 7/1/15**	**Wed 7/22/15**	
12	Agenda Drafted and Delivered to CDE	2 days	Wed 7/1/15	Thu 7/2/15	Pearson
13	Meeting held (Denver, CO)	2 days	Tue 7/14/15	Wed 7/15/15	
14	Meeting Minutes Distributed	5 days	Thu 7/16/15	Wed 7/22/15	Pearson
15	**Project Meeting 2**	**12 days**	**Tue 9/1/15**	**Wed 9/16/15**	
16	Agenda Drafted and Delivered to CDE	2 days	Tue 9/1/15	Wed 9/2/15	Pearson
17	Meeting held (Denver, CO)	2 days	Tue 9/8/15	Wed 9/9/15	
18	Meeting Minutes Distributed	5 days	Thu 9/10/15	Wed 9/16/15	Pearson
19	**Project Meeting 3 - In person**	**13 days**	**Mon 11/2/15**	**Wed 11/18/15**	
20	Agenda Drafted and Delivered to CDE	2 days	Mon 11/2/15	Tue 11/3/15	Pearson
21	Meeting held (San Antonio, TX)	2 days	Tue 11/10/15	Wed 11/11/15	
22	Meeting Minutes Distributed	5 days	Thu 11/12/15	Wed 11/18/15	Pearson
23	**Project Meeting 4**	**13 days**	**Mon 1/4/16**	**Wed 1/20/16**	
24	Agenda Drafted and Delivered to CDE	2 days	Mon 1/4/16	Tue 1/5/16	Pearson
25	Meeting held (Denver, CO)	2 days	Tue 1/12/16	Wed 1/13/16	
26	Meeting Minutes Distributed	5 days	Thu 1/14/16	Wed 1/20/16	Pearson
27	**Project Meeting 5**	**12 days**	**Tue 3/1/16**	**Wed 3/16/16**	
28	Agenda Drafted and Delivered to CDE	2 days	Tue 3/1/16	Wed 3/2/16	Pearson
29	Meeting held (Denver, CO)	2 days	Tue 3/8/16	Wed 3/9/16	
30	Meeting Minutes Distributed	5 days	Thu 3/10/16	Wed 3/16/16	Pearson
31	**Project Meeting 6 - In person**	**13 days**	**Mon 5/2/16**	**Wed 5/18/16**	
32	Agenda Drafted and Delivered to CDE	2 days	Mon 5/2/16	Tue 5/3/16	Pearson
33	Meeting held (San Antonio, TX)	2 days	Tue 5/10/16	Wed 5/11/16	
34	Meeting Minutes Distributed	5 days	Thu 5/12/16	Wed 5/18/16	Pearson
35	**Monthy Reports**	**240 days**	**Wed 8/5/15**	**Wed 7/6/16**	
36	Jul	0 days	Wed 8/5/15	Wed 8/5/15	Pearson
37	Aug	0 days	Thu 9/3/15	Thu 9/3/15	Pearson
38	Sep	0 days	Mon 10/5/15	Mon 10/5/15	Pearson

Colorado Summative Schedule - FY2016

ID	Task Name	Duration	Start	Finish	Resource Names
39	Oct	0 days	Thu 11/5/15	Thu 11/5/15	Pearson
40	Nov	0 days	Thu 12/3/15	Thu 12/3/15	Pearson
41	Dec	0 days	Wed 1/6/16	Wed 1/6/16	Pearson
42	Jan	0 days	Thu 2/4/16	Thu 2/4/16	Pearson
43	Feb	0 days	Fri 3/4/16	Fri 3/4/16	Pearson
44	Mar	0 days	Mon 4/4/16	Mon 4/4/16	Pearson
45	Apr	0 days	Thu 5/5/16	Thu 5/5/16	Pearson
46	May	0 days	Fri 6/3/16	Fri 6/3/16	Pearson
47	Jun	0 days	Wed 7/6/16	Wed 7/6/16	Pearson
48	**DAC**	**107 days**	**Wed 10/21/15**	**Thu 3/17/16**	
49	DAC Academy	2 days	Thu 2/18/16	Fri 2/19/16	Pearson
50	DAC Management 1	2 days	Wed 10/21/15	Thu 10/22/15	Pearson
51	DAC Management 2	2 days	Wed 3/16/16	Thu 3/17/16	Pearson
52	**Program Improvement**	**268 days**	**Tue 7/21/15**	**Thu 7/28/16**	
53	Program Improvement Plan - Development	15 days	Fri 1/8/16	Thu 1/28/16	Pearson
54	Program Improvement Plan - Production	15 days	Fri 2/12/16	Thu 3/3/16	Pearson
55	Program Improvement Plan - Shipping and Receipt	15 days	Wed 3/16/16	Tue 4/5/16	Pearson
56	Program Improvement Plan - Administration	15 days	Mon 4/25/16	Fri 5/13/16	Pearson
57	Program Improvement Plan - Scanning	15 days	Tue 7/21/15	Mon 8/10/15	Pearson
58	Program Improvement Plan - Scoring	15 days	Fri 7/8/16	Thu 7/28/16	Pearson
59	Program Improvement Plan - Data Processing	15 days	Fri 7/8/16	Thu 7/28/16	Pearson
60	Program Improvement Plan - Reporting and Psychometrics	15 days	Tue 9/1/15	Mon 9/21/15	Pearson
61	Program Improvement Plan - Meetings	15 days	Mon 10/5/15	Fri 10/23/15	Pearson
62	**Invoices**	**240 days**	**Wed 9/30/15**	**Wed 8/31/16**	
63	Invoice Q1	0 days	Wed 9/30/15	Wed 9/30/15	Pearson
64	Invoice Q2	0 days	Thu 12/31/15	Thu 12/31/15	Pearson
65	Invoice Q3	0 days	Thu 3/31/16	Thu 3/31/16	Pearson
66	Invoice Q4	0 days	Wed 6/15/16	Wed 6/15/16	Pearson
67	Invoice - "tail"	0 days	Wed 8/31/16	Wed 8/31/16	Pearson
68	**Assessment Development**	**304 days**	**Mon 6/1/15**	**Thu 7/28/16**	
69	**Documents - Development Specs**	**0 days**	**Wed 7/1/15**	**Wed 7/1/15**	
70	Eligible Content Document - Final	0 days	Wed 7/1/15	Wed 7/1/15	ETS
71	Claims Document - Final	0 days	Wed 7/1/15	Wed 7/1/15	ETS
72	Reporting Categories Document - Final	0 days	Wed 7/1/15	Wed 7/1/15	ETS
73	Assessment Framework - Final	0 days	Wed 7/1/15	Wed 7/1/15	ETS
74	Performance Level Descriptors – General - Final	0 days	Wed 7/1/15	Wed 7/1/15	ETS
75	Performance Level Descriptors – Grade Level Specific - Final	0 days	Wed 7/1/15	Wed 7/1/15	ETS
76	Test Blueprints/Specifications - Final	0 days	Wed 7/1/15	Wed 7/1/15	ETS
77	**Style Guide**	**30 days**	**Wed 7/1/15**	**Tue 8/11/15**	

Colorado Summative Schedule - FY2016

ID	Task Name	Duration	Start	Finish	Resource Names
78	Colorado Style Guide - Updates	30 days	Wed 7/1/15	Tue 8/11/15	ETS
79	Colorado Style Guide - Final for year	0 days	Tue 8/11/15	Tue 8/11/15	ETS
80	**Passages**	**118 days**	**Tue 9/15/15**	**Thu 2/25/16**	
81	Recruit Passage Reviewers	25 days	Mon 1/4/16	Fri 2/5/16	Pearson
82	Passage Develoment	81 days	Tue 9/15/15	Tue 1/5/16	ETS
83	Passage Selection - CDE Review	10 days	Wed 1/6/16	Tue 1/19/16	CDE
84	Prepare Passage Review Training Meeting materials	5 days	Wed 1/20/16	Tue 1/26/16	ETS
85	Passage Review Training Meeting Materials- CDE Review	5 days	Wed 1/27/16	Tue 2/2/16	CDE
86	Edit and ship materials after CDE review	9 days	Wed 2/3/16	Mon 2/15/16	ETS
87	Passage Review	3 days	Tue 2/16/16	Thu 2/18/16	ETS
88	ETS sends final results of Passage Review meeting to CDE	5 days	Fri 2/19/16	Thu 2/25/16	ETS
89	**Item Development (Spring 2017 Field Test)**	**128 days**	**Tue 2/2/16**	**Thu 7/28/16**	
90	Item Writer Recruiting	25 days	Tue 2/2/16	Mon 3/7/16	Pearson
91	Develop Training Materials and Item Development Plans	5 days	Thu 2/25/16	Wed 3/2/16	ETS
92	Item Development Meeting 1 Materials – CDE Review	5 days	Fri 3/4/16	Thu 3/10/16	CDE
93	Edit and ship materials after CDE review	7 days	Fri 3/11/16	Mon 3/21/16	ETS
94	Item Development Meeting 1	3 days	Tue 3/22/16	Thu 3/24/16	ETS
95	ETS provides developers feedback	39 days	Mon 3/28/16	Thu 5/19/16	ETS
96	ETS develops training materials and item development plans (meeting 2)	5 days	Mon 5/16/16	Fri 5/20/16	ETS
97	Item Writer Recruiting	25 days	Mon 5/2/16	Fri 6/3/16	Pearson
98	Item Development Meeting 2 Materials – CDE Review	3 days	Mon 5/30/16	Wed 6/1/16	CDE
99	Edit and ship materials after CDE review	8 days	Thu 6/2/16	Mon 6/13/16	ETS
100	Item Development Meeting 2	3 days	Tue 6/14/16	Thu 6/16/16	ETS
101	ETS provides developers feedback	10 days	Fri 6/17/16	Thu 6/30/16	ETS
102	ETS conducts internal Content and Editorial Reviews	20 days	Fri 7/1/16	Thu 7/28/16	ETS
103	**Content Review - R, M, Sc, W and PLD Meeting - SS (Spring 2016 Field Test)**	**68 days**	**Wed 7/1/15**	**Fri 10/2/15**	
104	Item Review – CDE Review (newly written items)	5 days	Mon 7/27/15	Fri 7/31/15	CDE
105	Recruit Content Review Participants	10 days	Wed 7/1/15	Tue 7/14/15	Pearson
106	ETS Creates training materials for Content and PLD Meetings	9 days	Fri 7/10/15	Wed 7/22/15	ETS
107	Content and PLD Meeting training Materials – CDE Review	5 days	Thu 7/23/15	Wed 7/29/15	CDE
108	Edit and ship materials after CDE review	13 days	Thu 7/30/15	Mon 8/17/15	ETS
109	Content and PLD Meeting	3 days	Tue 8/18/15	Thu 8/20/15	ETS
110	ETS implements edits suggested by committee	30 days	Fri 8/21/15	Thu 10/1/15	ETS
111	ETS sends final results of Content and Bias Sensitivity Review meeting	1 day	Fri 10/2/15	Fri 10/2/15	ETS
112	**Bias and Sensitivity Review**	**68 days**	**Wed 7/1/15**	**Fri 10/2/15**	
113	Recruit Content Review Participants	10 days	Wed 7/1/15	Tue 7/14/15	Pearson
114	ETS creates training materials for Bias and sensitivity Reviews	10 days	Fri 7/10/15	Thu 7/23/15	ETS
115	Bias and Sensitivity Review training materials – CDE Review	5 days	Fri 7/24/15	Thu 7/30/15	CDE
116	Edit and ship materials after CDE review	13 days	Fri 7/31/15	Tue 8/18/15	ETS

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ID	Task Name	Duration	Start	Finish	Resource Names
117	Bias and Sensitivity Review Meeting	1 day	Fri 8/21/15	Fri 8/21/15	ETS
118	ETS implements edits suggested by committee	30 days	Mon 8/24/15	Fri 10/2/15	ETS
119	ETS sends final results of Content and Bias Sensitivity Review meeting	1 day	Thu 8/27/15	Thu 8/27/15	ETS
120	**Data Review (for Spring 2016 Operational)**	**49 days**	**Mon 6/1/15**	**Thu 8/6/15**	
121	Recruit Data Review Participants	25 days	Mon 6/1/15	Fri 7/3/15	Pearson
122	ETS Prints Data Review Training Materials	10 days	Tue 6/16/15	Mon 6/29/15	ETS
123	Produce Data Review Training Materials – CDE Review	5 days	Tue 6/30/15	Mon 7/6/15	CDE
124	Edit and ship materials after CDE review	10 days	Tue 7/7/15	Mon 7/20/15	ETS
125	Conduct Data Review meeting	1 day	Tue 7/21/15	Tue 7/21/15	ETS
126	Conduct Data Review meeting (Standard Setting)	2 days	Tue 7/21/15	Wed 7/22/15	ETS
127	ETS implements edits suggested by committee	10 days	Thu 7/23/15	Wed 8/5/15	ETS
128	ETS provides final results of Data Review Meetings	1 day	Thu 8/6/15	Thu 8/6/15	ETS
129	**Form Development (Spring 2016 Operational)**	**147 days**	**Wed 7/1/15**	**Thu 1/21/16**	
130	Field Testing Plan	20 days	Wed 7/1/15	Tue 7/28/15	Pearson
131	**Core Test Form Development (Science, Social Studies)**	**50 days**	**Fri 8/7/15**	**Thu 10/15/15**	
132	ETS constructs forms	35 days	Fri 8/7/15	Thu 9/24/15	ETS
133	CDE reviews forms	5 days	Fri 9/25/15	Thu 10/1/15	CDE
134	ETS revises forms based on CDE review	5 days	Fri 10/2/15	Thu 10/8/15	ETS
135	Core Test Form Development – CDE Review Final	5 days	Fri 10/9/15	Thu 10/15/15	CDE
136	Core Test Form Development – Final	0 days	Thu 10/15/15	Thu 10/15/15	ETS
137	**Embedded Field Test Form Development**	**60 days**	**Fri 10/16/15**	**Thu 1/7/16**	
138	ETS constructs forms	45 days	Fri 10/16/15	Thu 12/17/15	ETS
139	CDE reviews forms	5 days	Fri 12/18/15	Thu 12/24/15	CDE
140	ETS revises forms based on CDE review	5 days	Fri 12/25/15	Thu 12/31/15	ETS
141	Embedded Field Test Form Development – Final	5 days	Fri 1/1/16	Thu 1/7/16	CDE
142	ETS sends Production ready files to Pearson (Files to Print)	0 days	Thu 1/7/16	Thu 1/7/16	ETS
143	**Special Populations**	**65 days**	**Wed 7/1/15**	**Tue 9/29/15**	
144	Accommodations Procedures Manual review rounds	60 days	Wed 7/1/15	Tue 9/22/15	ETS
145	Accommodations Procedures Manual - CDE Review Final	5 days	Wed 9/23/15	Tue 9/29/15	CDE
146	**Teacher Read Directions**	**50 days**	**Fri 10/16/15**	**Thu 12/24/15**	
147	ETS constructs directions	35 days	Fri 10/16/15	Thu 12/3/15	ETS
148	CDE reviews directions	5 days	Fri 12/4/15	Thu 12/10/15	CDE
149	ETS revises forms based on CDE review	5 days	Fri 12/11/15	Thu 12/17/15	ETS
150	Accommodated Materials: Teacher Read Directions – CDE Review Final	5 days	Fri 12/18/15	Thu 12/24/15	CDE
151	ETS sends Production ready files to Pearson	0 days	Thu 12/24/15	Thu 12/24/15	ETS
152	**Certification for District Translators**	**65 days**	**Wed 7/1/15**	**Tue 9/29/15**	
153	Procedures document produced	60 days	Wed 7/1/15	Tue 9/22/15	Pearson
154	Procedures for Certification for District Translators – CDE Review Final	5 days	Wed 9/23/15	Tue 9/29/15	CDE
155	**Test/Ancillary Material - Development**	**147 days**	**Wed 7/1/15**	**Thu 1/21/16**	

Colorado Summative Schedule - FY2016

ID	Task Name	Duration	Start	Finish	Resource Names
156	District and School Assessment Coordinator review rounds	60 days	Wed 7/1/15	Tue 9/22/15	Pearson
157	Document Development: District and School Assessment Coordinators Manual – CDE Review	5 days	Wed 9/23/15	Tue 9/29/15	CDE
158	Proctors Manual review rounds	30 days	Tue 11/17/15	Mon 12/28/15	Pearson
159	Document Development: Proctors Manual – CDE Review Final	5 days	Tue 12/29/15	Mon 1/4/16	CDE
160	Certification Forms review rounds	60 days	Wed 7/1/15	Tue 9/22/15	Pearson
161	Document Development: Certification Forms – CDE Review Final	5 days	Wed 9/23/15	Tue 9/29/15	CDE
162	Answer Document review rounds	45 days	Wed 7/1/15	Tue 9/1/15	Pearson
163	Document Development: Answer Document Layout - CDE Review Final	5 days	Wed 9/2/15	Tue 9/8/15	CDE
164	Document Development: Test Booklets/Answer Documents – CDE Review Final	5 days	Fri 1/15/16	Thu 1/21/16	CDE
165	Ancillary Materials (Manipulatives) review rounds	60 days	Wed 7/1/15	Tue 9/22/15	Pearson
166	Document Development: Ancillary Materials – CDE Review Final	5 days	Wed 9/23/15	Tue 9/29/15	CDE
167	**Assessment Administration**	**566 days**	**Wed 7/1/15**	**Thu 8/31/17**	
168	**Orders for Materials**	**45 days**	**Mon 2/1/16**	**Fri 4/1/16**	
169	Pre-ID File Transfer	0 days	Mon 2/1/16	Mon 2/1/16	CDE
170	Materials Ordering System Operational	0 days	Mon 2/1/16	Mon 2/1/16	Pearson
171	Materials Ordering Window	20 days	Mon 2/1/16	Fri 2/26/16	Pearson
172	Online Rosters Generated	5 days	Mon 2/29/16	Fri 3/4/16	Pearson
173	Additional Materials Ordering Window	10 days	Mon 3/21/16	Fri 4/1/16	Pearson
174	**Test/Ancillary Material - Production**	**162 days**	**Wed 7/1/15**	**Thu 2/11/16**	
175	Proctors Manual Produced	15 days	Tue 1/5/16	Mon 1/25/16	Pearson
176	Test Booklets/Answer Documents Produced	25 days	Fri 1/8/16	Thu 2/11/16	Pearson
177	Ancillaries Produced	15 days	Wed 9/30/15	Tue 10/20/15	Pearson
178	Accommodated Materials Produced	25 days	Wed 7/1/15	Tue 8/4/15	Pearson
179	Certification Forms Produced	5 days	Wed 9/30/15	Tue 10/6/15	Pearson
180	**Packaging and Delivery**	**52 days**	**Sat 1/2/16**	**Tue 3/15/16**	
181	Colorado Districts in Shipping System	0 days	Mon 2/1/16	Mon 2/1/16	Pearson
182	Packaging Specifications Finalized	0 days	Sat 1/2/16	Sat 1/2/16	Pearson
183	Non-secure Materials Packaged	20 days	Fri 2/12/16	Thu 3/10/16	Pearson
184	Non-secure Materials Shipped	3 days	Fri 3/11/16	Tue 3/15/16	Pearson
185	Non-secure Materials in District	0 days	Tue 3/15/16	Tue 3/15/16	Pearson
186	Secure Materials Packaged	20 days	Fri 2/12/16	Thu 3/10/16	Pearson
187	Secure Materials Shipped	3 days	Fri 3/11/16	Tue 3/15/16	Pearson
188	Secure Materials in District	0 days	Tue 3/15/16	Tue 3/15/16	Pearson
189	**Test Administration**	**15 days**	**Mon 4/4/16**	**Fri 4/22/16**	
190	Operational On-line Test Administration Window - Science, Social Studies	15 days	Mon 4/4/16	Fri 4/22/16	
191	**Material Return and Verification**	**566 days**	**Wed 7/1/15**	**Thu 8/31/17**	
192	To Be Scored Materials Return EARLY Shipment	0 days	Wed 7/1/15	Wed 7/1/15	CO DISTRICTS
193	To Be Scored Materials Return Shipment	0 days	Wed 7/1/15	Wed 7/1/15	CO DISTRICTS
194	Not To Be Scored Materials Return Shipment	0 days	Wed 7/1/15	Wed 7/1/15	CO DISTRICTS

Colorado Summative Schedule - FY2016

ID	Task Name	Duration	Start	Finish	Resource Names
195	Non-scored Materials Destruction	0 days	Thu 3/2/17	Thu 3/2/17	Pearson
196	Scored Materials Destruction	0 days	Thu 8/31/17	Thu 8/31/17	Pearson
197	Secure Materials Verification – Initial Report	0 days	Tue 7/14/15	Tue 7/14/15	Pearson
198	Secure Materials Verification – Weekly Report	0 days	Tue 7/21/15	Tue 7/21/15	Pearson
199	Secure Materials Verification – Final Report	0 days	Tue 7/28/15	Tue 7/28/15	Pearson
200	**Test Monitoring**	**163 days**	**Wed 7/1/15**	**Sat 2/13/16**	
201	Test Monitoring Protocol review rounds	60 days	Wed 7/1/15	Tue 9/22/15	Pearson
202	Test Monitoring Protocol – CDE Review Final	5 days	Wed 9/23/15	Tue 9/29/15	CDE
203	Test Monitoring Sites Selected	0 days	Fri 1/15/16	Fri 1/15/16	Pearson
204	Test Monitoring Sites Notified – TBD if needed	0 days	Sat 2/13/16	Sat 2/13/16	Pearson
205	Test Monitoring	15 days	Wed 7/1/15	Tue 7/21/15	Pearson
206	**Web-Based Online Test Delivery System**	**173 days**	**Wed 7/1/15**	**Mon 2/29/16**	
207	**Online Readiness Assessment**	**20 days**	**Thu 9/17/15**	**Wed 10/14/15**	
208	Conduct the Online Readiness Assessment	5 days	Thu 9/17/15	Wed 9/23/15	Pearson
209	Online Readiness Assessment Results	5 days	Thu 9/24/15	Wed 9/30/15	Pearson
210	Infrastructure Plan - Final	10 days	Thu 10/1/15	Wed 10/14/15	Pearson
211	**Online Tutorials**	**173 days**	**Wed 7/1/15**	**Mon 2/29/16**	
212	Online Tutorials review rounds	30 days	Mon 1/4/16	Fri 2/12/16	Pearson
213	Online Tutorials – CDE Review Final	5 days	Mon 2/15/16	Fri 2/19/16	CDE
214	Online Tutorials Available for District Use	0 days	Mon 2/29/16	Mon 2/29/16	Pearson
215	Online Accommodations Functionality document review rounds	60 days	Wed 7/1/15	Tue 9/22/15	Pearson
216	Online Accommodations Functionality – CDE Review Final	5 days	Wed 9/23/15	Tue 9/29/15	CDE
217	**Online Test Delivery**	**159 days**	**Wed 7/1/15**	**Mon 2/8/16**	
218	Online Test Delivery System Demonstration	0 days	Sat 8/1/15	Sat 8/1/15	Pearson
219	Online Test Delivery System Testing	80 days	Mon 8/3/15	Fri 11/20/15	Pearson
220	Online Test Delivery System Available for District Installation/Download	0 days	Fri 11/20/15	Fri 11/20/15	Pearson
221	Forms Loaded in Online Test Delivery System	10 days	Fri 1/8/16	Thu 1/21/16	Pearson
222	Mitigation and Contingency Plans - Final	30 days	Wed 7/1/15	Tue 8/11/15	Pearson
223	Establish Unique Log-in ID and Passwords (CDE staff, technology directors, DACs, SACs, test proctors, students)	5 days	Mon 2/1/16	Fri 2/5/16	Pearson
224	Distribute Unique Log-in ID and Passowrds (CDE staff, technology directors, DACs, SACs, test proctors, students)	1 day	Mon 2/8/16	Mon 2/8/16	Pearson
225	**Scanning and Scoring**	**267 days**	**Wed 7/1/15**	**Thu 7/7/16**	
226	**Anchor Validation (from Spring 2015 Field Test)**	**83 days**	**Tue 8/18/15**	**Thu 12/10/15**	
227	Recruit Anchor Validation Participants	20 days	Tue 8/18/15	Mon 9/14/15	Pearson
228	Anchor Validation Meeting	3 days	Tue 9/29/15	Thu 10/1/15	Pearson
229	Scoring Decision Guide review rounds	45 days	Fri 10/2/15	Thu 12/3/15	Pearson
230	Scoring Decision Guide – CDE Review Final	5 days	Fri 12/4/15	Thu 12/10/15	CDE
231	**Scoring Processes**	**267 days**	**Wed 7/1/15**	**Thu 7/7/16**	
232	Scanning Specifications review rounds	20 days	Wed 7/1/15	Tue 7/28/15	Pearson

Colorado Summative Schedule - FY2016

ID	Task Name	Duration	Start	Finish	Resource Names
233	Scanning Specifications – CDE Review Final	5 days	Wed 7/29/15	Tue 8/4/15	CDE
234	Materials Scanned	10 days	Tue 7/7/15	Mon 7/20/15	Pearson
235	Key Verification – CDE Review	2 days	Fri 4/29/16	Mon 5/2/16	CDE
236	Alerts Resolved and Clean Post	10 days	Tue 7/7/15	Mon 7/20/15	Pearson
237	Operational Scoring Window	7 days	Mon 7/13/15	Tue 7/21/15	
238	**Rangefinding**	**34 days**	**Mon 4/11/16**	**Thu 5/26/16**	
239	Recruit Rangefinding Participants	20 days	Mon 4/11/16	Fri 5/6/16	Pearson
240	Rangefinding Meeting	3 days	Tue 5/24/16	Thu 5/26/16	Pearson
241	Scoring Staff Requirements Established	0 days	Wed 7/1/15	Wed 7/1/15	Pearson
242	Scoring Staff Recruitment and Hiring	20 days	Fri 4/1/16	Thu 4/28/16	Pearson
243	Scoring Training Materials review rounds	20 days	Fri 5/27/16	Thu 6/23/16	Pearson
244	Scoring Training Materials – CDE Review Final	3 days	Fri 6/24/16	Tue 6/28/16	CDE
245	Scoring Window	7 days	Wed 6/29/16	Thu 7/7/16	Pearson
246	Scoring Site Scheduled Visit - CDE	2 days	Fri 7/1/16	Mon 7/4/16	CDE
247	Reliability and Validity Scoring Specification/Procedures review rounds	30 days	Wed 7/1/15	Tue 8/11/15	Pearson
248	Reliability and Validity Scoring Specification/Procedures - CDE Review Final	5 days	Wed 8/12/15	Tue 8/18/15	CDE
249	Procedures for Unusual Responses - review rounds	30 days	Wed 7/1/15	Tue 8/11/15	Pearson
250	Procedures for Unusual Responses - CDE Review Final	5 days	Wed 8/12/15	Tue 8/18/15	CDE
251	Rescoring Specifications/Procedures review rounds	30 days	Wed 7/1/15	Tue 8/11/15	Pearson
252	Rescoring Specifications/Procedures - CDE Review Final	5 days	Wed 8/12/15	Tue 8/18/15	CDE
253	**Reporting of Data Files and Assessment Results**	**65 days**	**Wed 7/1/15**	**Tue 9/29/15**	
254	**Reporting Files - Specs**	**65 days**	**Wed 7/1/15**	**Tue 9/29/15**	
255	Reporting: Data File Layout review rounds	45 days	Wed 7/1/15	Tue 9/1/15	Pearson
256	Reporting: Score Report Shells review rounds	60 days	Wed 7/1/15	Tue 9/22/15	Pearson
257	Reporting: Individual Student Level File Layout - CDE Review Final	5 days	Wed 9/2/15	Tue 9/8/15	CDE
258	Reporting: Individual Student Level Report Shells – CDE Review Final	5 days	Wed 9/23/15	Tue 9/29/15	CDE
259	Reporting: State Level File Layouts – CDE Review Final	5 days	Wed 9/2/15	Tue 9/8/15	CDE
260	Reporting: District Level File Layouts – CDE Review Final	5 days	Wed 9/2/15	Tue 9/8/15	CDE
261	Reporting: District Level Report Shells – CDE Review Final	5 days	Wed 9/23/15	Tue 9/29/15	CDE
262	Reporting: School Level File Layouts – CDE Review Final	5 days	Wed 9/2/15	Tue 9/8/15	CDE
263	Reporting: School Level Report Shells – CDE Review Final	5 days	Wed 9/23/15	Tue 9/29/15	CDE
264	**Reports**	**44 days**	**Wed 7/1/15**	**Mon 8/31/15**	
265	Student Biographical Data Review Window	10 days	Tue 7/21/15	Mon 8/3/15	CO DISTRICTS
266	**Operational Reporting - Science, Social Studies**	**16 days**	**Mon 8/10/15**	**Mon 8/31/15**	
267	Reporting: QC of Individual Student Level File – CDE Review	1 day	Mon 8/10/15	Mon 8/10/15	CDE
268	Reporting: QC of Individual Student Level File – CDE Verification	0 days	Mon 8/10/15	Mon 8/10/15	CDE
269	Reporting: Individual Student Level File Posted	0 days	Mon 8/10/15	Mon 8/10/15	Pearson
270	Reporting: Individual Student Report Bellwethers	2 days	Fri 8/14/15	Mon 8/17/15	CDE
271	Reporting: Individual Student Level File Electronic Reports Posted	0 days	Thu 8/20/15	Thu 8/20/15	Pearson

Colorado Summative Schedule - FY2016

ID	Task Name	Duration	Start	Finish	Resource Names
272	Reporting: Individual Student Level Hard Copy Reports in District	0 days	Mon 8/31/15	Mon 8/31/15	Pearson
273	**Operational Reporting - Standard Setting (Post Standard Setting)**	**16 days**	**Wed 7/1/15**	**Wed 7/22/15**	
274	Reporting: QC of Individual Student Level File – CDE Review	1 day	Wed 7/1/15	Wed 7/1/15	CDE
275	Reporting: QC of Individual Student Level File – CDE Verification	0 days	Wed 7/1/15	Wed 7/1/15	CDE
276	Reporting: Individual Student Level File Posted	0 days	Wed 7/1/15	Wed 7/1/15	Pearson
277	Reporting: Individual Student Report Bellwethers	2 days	Tue 7/7/15	Wed 7/8/15	CDE
278	Reporting: Individual Student Level File Electronic Reports Posted	0 days	Mon 7/13/15	Mon 7/13/15	Pearson
279	Reporting: Individual Student Level Hard Copy Reports in District	0 days	Wed 7/22/15	Wed 7/22/15	Pearson
280	**State Level Files**	**8 days**	**Wed 7/1/15**	**Fri 7/10/15**	
281	Pearson updates scoring system and produces/verifies State Level File	6 days	Wed 7/1/15	Wed 7/8/15	Pearson
282	Reporting: QC of State Level File(s) – CDE Review	2 days	Thu 7/9/15	Fri 7/10/15	CDE
283	Reporting: QC of State Level File(s) – CDE Verification	0 days	Fri 7/10/15	Fri 7/10/15	CDE
284	Reporting: State Level File(s) Posted	0 days	Fri 7/10/15	Fri 7/10/15	Pearson
285	**District Level Files**	**10 days**	**Thu 7/9/15**	**Wed 7/22/15**	
286	Reporting: QC of District Level File(s) – CDE Review	2 days	Thu 7/9/15	Fri 7/10/15	CDE
287	Reporting: QC of District Level File(s) – CDE Verification	0 days	Fri 7/10/15	Fri 7/10/15	CDE
288	Reporting: District Level File(s) Posted	0 days	Fri 7/10/15	Fri 7/10/15	Pearson
289	Reporting: District Reports Bellwethers	2 days	Thu 7/16/15	Fri 7/17/15	CDE
290	Reporting: District Electronic Reports Posted	0 days	Wed 7/22/15	Wed 7/22/15	Pearson
291	**School Level Files**	**10 days**	**Thu 7/9/15**	**Wed 7/22/15**	
292	Reporting: QC of School Level File(s) – CDE Review	2 days	Thu 7/9/15	Fri 7/10/15	CDE
293	Reporting: QC of School Level File(s) – CDE Verification	0 days	Fri 7/10/15	Fri 7/10/15	CDE
294	Reporting: School Level File(s) Posted	0 days	Fri 7/10/15	Fri 7/10/15	Pearson
295	Reporting: School Reports Bellwethers	2 days	Thu 7/16/15	Fri 7/17/15	CDE
296	Reporting: School Electronic Reports Posted	0 days	Wed 7/22/15	Wed 7/22/15	Pearson
297	**Interpretive Guide**	**65 days**	**Wed 7/1/15**	**Tue 9/29/15**	
298	Interpretive Guide review rounds	60 days	Wed 7/1/15	Tue 9/22/15	Pearson
299	Assessment Interpretive Guide – Review Final	5 days	Wed 9/23/15	Tue 9/29/15	CDE
300	Assessment Interpretive Guide Posted	0 days	Tue 9/29/15	Tue 9/29/15	Pearson
301	**Psychometric, Research, and Technical Activities**	**293 days**	**Wed 7/1/15**	**Mon 8/15/16**	
302	**Field Test and Operational Analysis**	**60 days**	**Wed 7/1/15**	**Tue 9/22/15**	
303	Field Test- Sampling Design	60 days	Wed 7/1/15	Tue 9/22/15	Pearson
304	Psychometric Analysis of Field Test	30 days	Tue 7/21/15	Mon 8/31/15	Pearson
305	Operational Analysis	9 days	Mon 7/13/15	Thu 7/23/15	Pearson
306	CDE Review and Approval of Equating Results	1 day	Fri 7/24/15	Fri 7/24/15	CDE
307	**TAC Meetings**	**112 days**	**Tue 9/1/15**	**Wed 2/3/16**	
308	TAC Meeting 1	2 days	Tue 9/1/15	Wed 9/2/15	Pearson
309	TAC Meeting 2	2 days	Tue 12/1/15	Wed 12/2/15	Pearson
310	TAC Meeting 3	2 days	Tue 2/2/16	Wed 2/3/16	Pearson

Colorado Summative Schedule - FY2016

ID	Task Name	Duration	Start	Finish	Resource Names
311	**Technical Reports**	**279 days**	**Tue 7/21/15**	**Mon 8/15/16**	
312	Technical Report – Final version to CDE	0 days	Mon 8/15/16	Mon 8/15/16	Pearson
313	Irregularity and Data Forensic Report	10 days	Tue 7/21/15	Mon 8/3/15	Pearson
314	**Training and Support**	**178 days**	**Wed 7/1/15**	**Fri 3/4/16**	
315	Understanding Assessment Results Training Materials review rounds	20 days	Wed 7/1/15	Tue 7/28/15	Pearson
316	Understanding Assessment Results Training Material - CDE Final Review	5 days	Wed 7/29/15	Tue 8/4/15	CDE
317	Understanding Assessment Results Training	5 days	Mon 8/24/15	Fri 8/28/15	Pearson
318	Technology Director Training Material review rounds	60 days	Wed 7/1/15	Tue 9/22/15	Pearson
319	Technology Director Training Material CDE Review Final	5 days	Wed 9/23/15	Tue 9/29/15	CDE
320	Conduct Technology Director Training	5 days	Mon 2/1/16	Fri 2/5/16	Pearson
321	Assessment Administration Training Material review rounds	30 days	Mon 1/4/16	Fri 2/12/16	Pearson
322	Assessment Administration Training Material CDE Review Final	5 days	Mon 2/15/16	Fri 2/19/16	CDE
323	Conduct Assessment Administration Training	5 days	Mon 2/29/16	Fri 3/4/16	Pearson
324	**Customer Service**	**261 days**	**Wed 7/1/15**	**Thu 6/30/16**	
325	Customer feedback survey	0 days	Thu 6/30/16	Thu 6/30/16	Pearson
326	Establish DAC Website	20 days	Wed 7/1/15	Tue 7/28/15	Pearson

Colorado Summative Schedule - FY2017

ID	Task Name	Duration	Start	Finish	Resource Names
0	**CO Summative - FY2017**	**542 days**	**Wed 6/1/16**	**Fri 6/29/18**	
1	**START**	**542 days**	**Wed 6/1/16**	**Fri 6/29/18**	
2	**General**	**5 days**	**Fri 7/1/16**	**Thu 7/7/16**	
3	Security Plan updated and rebaselined	5 days	Fri 7/1/16	Thu 7/7/16	Pearson
4	**Program Management**	**304 days**	**Fri 7/1/16**	**Thu 8/31/17**	
5	**Project Schedule**	**9 days**	**Fri 7/1/16**	**Wed 7/13/16**	
6	Draft Project Schedule Created	4 days	Fri 7/1/16	Wed 7/6/16	Pearson/ETS
7	Project Schedule - CDE Review	3 days	Thu 7/7/16	Mon 7/11/16	CDE
8	Project Schedule - CDE and Pearson Joint Review	1 day	Tue 7/12/16	Tue 7/12/16	Pearson/ETS/CDE
9	Project Schedule Updated and Baselined	1 day	Wed 7/13/16	Wed 7/13/16	Pearson
10	**Project Meetings**	**229 days**	**Fri 7/1/16**	**Wed 5/17/17**	
11	**Project Meeting 1**	**14 days**	**Fri 7/1/16**	**Wed 7/20/16**	
12	Agenda Drafted and Delivered to CDE	2 days	Fri 7/1/16	Mon 7/4/16	Pearson
13	Meeting held (Denver, CO)	2 days	Tue 7/12/16	Wed 7/13/16	
14	Meeting Minutes Distributed	5 days	Thu 7/14/16	Wed 7/20/16	Pearson
15	**Project Meeting 2**	**15 days**	**Thu 9/1/16**	**Wed 9/21/16**	
16	Agenda Drafted and Delivered to CDE	2 days	Thu 9/1/16	Fri 9/2/16	Pearson
17	Meeting held (Denver, CO)	2 days	Tue 9/13/16	Wed 9/14/16	
18	Meeting Minutes Distributed	5 days	Thu 9/15/16	Wed 9/21/16	Pearson
19	**Project Meeting 3 - In person**	**12 days**	**Tue 11/1/16**	**Wed 11/16/16**	
20	Agenda Drafted and Delivered to CDE	2 days	Tue 11/1/16	Wed 11/2/16	Pearson
21	Meeting held (San Antonio, TX)	2 days	Tue 11/8/16	Wed 11/9/16	
22	Meeting Minutes Distributed	5 days	Thu 11/10/16	Wed 11/16/16	Pearson
23	**Project Meeting 4**	**13 days**	**Mon 1/2/17**	**Wed 1/18/17**	
24	Agenda Drafted and Delivered to CDE	2 days	Mon 1/2/17	Tue 1/3/17	Pearson
25	Meeting held (Denver, CO)	2 days	Tue 1/10/17	Wed 1/11/17	
26	Meeting Minutes Distributed	5 days	Thu 1/12/17	Wed 1/18/17	Pearson
27	**Project Meeting 5**	**16 days**	**Wed 3/1/17**	**Wed 3/22/17**	
28	Agenda Drafted and Delivered to CDE	2 days	Wed 3/1/17	Thu 3/2/17	Pearson
29	Meeting held (Denver, CO)	2 days	Tue 3/14/17	Wed 3/15/17	
30	Meeting Minutes Distributed	5 days	Thu 3/16/17	Wed 3/22/17	Pearson
31	**Project Meeting 6 - In person**	**13 days**	**Mon 5/1/17**	**Wed 5/17/17**	
32	Agenda Drafted and Delivered to CDE	2 days	Mon 5/1/17	Tue 5/2/17	Pearson
33	Meeting held (San Antonio, TX)	2 days	Tue 5/9/17	Wed 5/10/17	
34	Meeting Minutes Distributed	5 days	Thu 5/11/17	Wed 5/17/17	Pearson
35	**Monthy Reports**	**241 days**	**Wed 8/3/16**	**Thu 7/6/17**	
36	Jul	0 days	Wed 8/3/16	Wed 8/3/16	Pearson
37	Aug	0 days	Mon 9/5/16	Mon 9/5/16	Pearson
38	Sep	0 days	Wed 10/5/16	Wed 10/5/16	Pearson

Colorado Summative Schedule - FY2017

ID	Task Name	Duration	Start	Finish	Resource Names
39	Oct	0 days	Thu 11/3/16	Thu 11/3/16	Pearson
40	Nov	0 days	Mon 12/5/16	Mon 12/5/16	Pearson
41	Dec	0 days	Wed 1/4/17	Wed 1/4/17	Pearson
42	Jan	0 days	Fri 2/3/17	Fri 2/3/17	Pearson
43	Feb	0 days	Fri 3/3/17	Fri 3/3/17	Pearson
44	Mar	0 days	Wed 4/5/17	Wed 4/5/17	Pearson
45	Apr	0 days	Wed 5/3/17	Wed 5/3/17	Pearson
46	May	0 days	Mon 6/5/17	Mon 6/5/17	Pearson
47	Jun	0 days	Thu 7/6/17	Thu 7/6/17	Pearson
48	**DAC**	**107 days**	**Wed 10/19/16**	**Thu 3/16/17**	
49	DAC Academy	2 days	Tue 2/21/17	Wed 2/22/17	Pearson
50	DAC Management 1	2 days	Wed 10/19/16	Thu 10/20/16	Pearson
51	DAC Management 2	2 days	Wed 3/15/17	Thu 3/16/17	Pearson
52	**Program Improvement**	**204 days**	**Mon 10/10/16**	**Thu 7/20/17**	
53	Program Improvement Plan - Development	15 days	Thu 1/5/17	Wed 1/25/17	Pearson
54	Program Improvement Plan - Production	15 days	Thu 1/26/17	Wed 2/15/17	Pearson
55	Program Improvement Plan - Shipping and Receipt	15 days	Tue 2/21/17	Mon 3/13/17	Pearson
56	Program Improvement Plan - Administration	15 days	Mon 4/24/17	Fri 5/12/17	Pearson
57	Program Improvement Plan - Scanning	15 days	Fri 5/5/17	Thu 5/25/17	Pearson
58	Program Improvement Plan - Scoring	15 days	Fri 6/30/17	Thu 7/20/17	Pearson
59	Program Improvement Plan - Data Processing	15 days	Fri 6/30/17	Thu 7/20/17	Pearson
60	Program Improvement Plan - Reporting and Psychometrics	15 days	Fri 6/16/17	Thu 7/6/17	Pearson
61	Program Improvement Plan - Meetings	15 days	Mon 10/10/16	Fri 10/28/16	Pearson
62	**Invoices**	**239 days**	**Fri 9/30/16**	**Thu 8/31/17**	
63	Invoice Q1	0 days	Fri 9/30/16	Fri 9/30/16	Pearson
64	Invoice Q2	0 days	Fri 12/30/16	Fri 12/30/16	Pearson
65	Invoice Q3	0 days	Fri 3/31/17	Fri 3/31/17	Pearson
66	Invoice Q4	0 days	Thu 6/15/17	Thu 6/15/17	Pearson
67	Invoice - "tail"	0 days	Thu 8/31/17	Thu 8/31/17	Pearson
68	**Assessment Development**	**297 days**	**Wed 6/1/16**	**Thu 7/20/17**	
69	**Documents - Development Specs**	**0 days**	**Fri 7/1/16**	**Fri 7/1/16**	
70	Eligible Content Document - Final	0 days	Fri 7/1/16	Fri 7/1/16	ETS
71	Claims Document - Final	0 days	Fri 7/1/16	Fri 7/1/16	ETS
72	Reporting Categories Document - Final	0 days	Fri 7/1/16	Fri 7/1/16	ETS
73	Assessment Framework - Final	0 days	Fri 7/1/16	Fri 7/1/16	ETS
74	Performance Level Descriptors – General - Final	0 days	Fri 7/1/16	Fri 7/1/16	ETS
75	Performance Level Descriptors – Grade Level Specific - Final	0 days	Fri 7/1/16	Fri 7/1/16	ETS
76	Test Blueprints/Specifications - Final	0 days	Fri 7/1/16	Fri 7/1/16	ETS
77	**Style Guide**	**30 days**	**Fri 7/1/16**	**Thu 8/11/16**	

Colorado Summative Schedule - FY2017

ID	Task Name	Duration	Start	Finish	Resource Names
78	Colorado Style Guide - Updates	30 days	Fri 7/1/16	Thu 8/11/16	ETS
79	Colorado Style Guide - Final for year	0 days	Thu 8/11/16	Thu 8/11/16	ETS
80	**Passages**	**126 days**	**Thu 9/15/16**	**Thu 3/9/17**	
81	Recruit Passage Reviewers	25 days	Mon 1/2/17	Fri 2/3/17	Pearson
82	Passage Develoment	89 days	Thu 9/15/16	Tue 1/17/17	ETS
83	Passage Selection - CDE Review	10 days	Wed 1/18/17	Tue 1/31/17	CDE
84	Prepare Passage Review Training Meeting materials	5 days	Wed 2/1/17	Tue 2/7/17	ETS
85	Passage Review Training Meeting Materials- CDE Review	5 days	Wed 2/8/17	Tue 2/14/17	CDE
86	Edit and ship materials after CDE review	9 days	Wed 2/15/17	Mon 2/27/17	ETS
87	Passage Review	3 days	Tue 2/28/17	Thu 3/2/17	ETS
88	ETS sends final results of Passage Review meeting to CDE	5 days	Fri 3/3/17	Thu 3/9/17	ETS
89	**Item Development (Spring 2018 Field Test)**	**134 days**	**Mon 1/16/17**	**Thu 7/20/17**	
90	Item Writer Recruiting	25 days	Mon 1/16/17	Fri 2/17/17	Pearson
91	Develop Training Materials and Item Development Plans	5 days	Wed 2/15/17	Tue 2/21/17	ETS
92	Item Development Meeting 1 Materials – CDE Review	5 days	Wed 2/22/17	Tue 2/28/17	CDE
93	Edit materials after CDE review	4 days	Wed 3/1/17	Mon 3/6/17	ETS
94	Item Development Meeting 1	3 days	Tue 3/7/17	Thu 3/9/17	ETS
95	ETS provides developers feedback	51 days	Fri 3/10/17	Fri 5/19/17	ETS
96	ETS develops training materials and item development plans (meeting 2)	5 days	Mon 5/22/17	Fri 5/26/17	ETS
97	Item Writer Recruiting	25 days	Tue 4/25/17	Mon 5/29/17	Pearson
98	Item Development Meeting 2 Materials – CDE Review	3 days	Mon 5/29/17	Wed 5/31/17	CDE
99	Edit materials after CDE review	3 days	Thu 6/1/17	Mon 6/5/17	ETS
100	Item Development Meeting 2	3 days	Tue 6/6/17	Thu 6/8/17	ETS
101	ETS provides developers feedback	10 days	Fri 6/9/17	Thu 6/22/17	ETS
102	ETS conducts internal Content and Editorial Reviews	20 days	Fri 6/23/17	Thu 7/20/17	ETS
103	**Content and Bias Review - Science, Social Studies (Spring 2017 Field Test)**	**65 days**	**Mon 7/11/16**	**Fri 10/7/16**	
104	Item Review – CDE Review (newly written items)	5 days	Wed 7/27/16	Tue 8/2/16	CDE
105	Recruit Content Review Participants	20 days	Mon 7/11/16	Fri 8/5/16	Pearson
106	ETS creates Training materials for Content and Bias/sensitivity Reviews	4 days	Fri 7/29/16	Wed 8/3/16	ETS
107	Content and Bias/Sensitivity Review Training Materials – CDE Review	3 days	Thu 8/4/16	Mon 8/8/16	CDE
108	Edit and ship materials after CDE review	10 days	Tue 8/9/16	Mon 8/22/16	ETS
109	Content and Bias Review Meeting	3 days	Tue 8/23/16	Thu 8/25/16	ETS
110	ETS implements edits suggested by committee	30 days	Fri 8/26/16	Thu 10/6/16	ETS
111	ETS sends final results of Content and Bias Sensitivity Review meeting	1 day	Fri 10/7/16	Fri 10/7/16	ETS
112	**Data Review (for Spring 2016 Operational)**	**46 days**	**Wed 6/1/16**	**Wed 8/3/16**	
113	Recruit Data Review Participants	25 days	Wed 6/1/16	Tue 7/5/16	Pearson
114	ETS Prints Data Review Training Materials	10 days	Tue 6/14/16	Mon 6/27/16	ETS
115	Produce Data Review Training Materials – CDE Review	5 days	Tue 6/28/16	Mon 7/4/16	CDE
116	Edit and ship materials after CDE review	10 days	Tue 7/5/16	Mon 7/18/16	ETS

Colorado Summative Schedule - FY2017

ID	Task Name	Duration	Start	Finish	Resource Names
117	Conduct Data Review meeting	1 day	Tue 7/19/16	Tue 7/19/16	ETS
118	ETS implements edits suggested by committee	10 days	Wed 7/20/16	Tue 8/2/16	ETS
119	ETS provides final results of Data Review Meetings	1 day	Wed 8/3/16	Wed 8/3/16	ETS
120	**Form Development (Spring 2016 Operational and Breach Forms)**	**144 days**	**Fri 7/1/16**	**Wed 1/18/17**	
121	Field Testing Plan	20 days	Fri 7/1/16	Thu 7/28/16	Pearson
122	**Core Test Form Development (Science, Social Studies)**	**50 days**	**Thu 8/4/16**	**Wed 10/12/16**	
123	ETS constructs forms	35 days	Thu 8/4/16	Wed 9/21/16	ETS
124	CDE reviews forms	5 days	Thu 9/22/16	Wed 9/28/16	CDE
125	ETS revises forms based on CDE review	5 days	Thu 9/29/16	Wed 10/5/16	ETS
126	Core Test Form Development – CDE Review Final	5 days	Thu 10/6/16	Wed 10/12/16	CDE
127	Core Test Form Development – Final	0 days	Wed 10/12/16	Wed 10/12/16	ETS
128	**Embedded Field Test Form Development**	**60 days**	**Thu 10/13/16**	**Wed 1/4/17**	
129	ETS constructs forms	45 days	Thu 10/13/16	Wed 12/14/16	ETS
130	CDE reviews forms	5 days	Thu 12/15/16	Wed 12/21/16	CDE
131	ETS revises forms based on CDE review	5 days	Thu 12/22/16	Wed 12/28/16	ETS
132	Embedded Field Test Form Development – Final	5 days	Thu 12/29/16	Wed 1/4/17	CDE
133	ETS sends Production ready files to Pearson (Files to Print)	0 days	Wed 1/4/17	Wed 1/4/17	ETS
134	**Special Populations**	**65 days**	**Fri 7/1/16**	**Thu 9/29/16**	
135	Accommodations Procedures Manual review rounds	60 days	Fri 7/1/16	Thu 9/22/16	Pearson
136	Accommodations Procedures Manual - CDE Review Final	5 days	Fri 9/23/16	Thu 9/29/16	CDE
137	**Teacher Read Directions**	**50 days**	**Thu 10/13/16**	**Wed 12/21/16**	
138	ETS constructs directions	35 days	Thu 10/13/16	Wed 11/30/16	ETS
139	CDE reviews directions	5 days	Thu 12/1/16	Wed 12/7/16	CDE
140	ETS revises forms based on CDE review	5 days	Thu 12/8/16	Wed 12/14/16	ETS
141	Accommodated Materials: Teacher Read Directions – CDE Review Final	5 days	Thu 12/15/16	Wed 12/21/16	CDE
142	ETS sends Production ready files to Pearson	0 days	Wed 12/21/16	Wed 12/21/16	ETS
143	**Certification for District Translators**	**65 days**	**Fri 7/1/16**	**Thu 9/29/16**	
144	Procedures document produced	60 days	Fri 7/1/16	Thu 9/22/16	Pearson
145	Procedures for Certification for District Translators – CDE Review Final	5 days	Fri 9/23/16	Thu 9/29/16	CDE
146	**Test/Ancillary Material - Development**	**144 days**	**Fri 7/1/16**	**Wed 1/18/17**	
147	District and School Assessment Coordinator review rounds	60 days	Fri 7/1/16	Thu 9/22/16	Pearson
148	Document Development: District and School Assessment Coordinators Manual – CDE Review Final	5 days	Fri 9/23/16	Thu 9/29/16	CDE
149	Proctors Manual review rounds	30 days	Thu 11/17/16	Wed 12/28/16	Pearson
150	Document Development: Proctors Manual – CDE Review Final	5 days	Thu 12/29/16	Wed 1/4/17	CDE
151	Certification Forms review rounds	60 days	Fri 7/1/16	Thu 9/22/16	Pearson
152	Document Development: Certification Forms – CDE Review Final	5 days	Fri 9/23/16	Thu 9/29/16	CDE
153	Answer Document review rounds	45 days	Fri 7/1/16	Thu 9/1/16	Pearson
154	Document Development: Answer Document Layout - CDE Review Final	5 days	Fri 9/2/16	Thu 9/8/16	CDE
155	Document Development: Test Booklets/Answer Documents – CDE Review Final	5 days	Thu 1/12/17	Wed 1/18/17	CDE

Colorado Summative Schedule - FY2017

ID	Task Name	Duration	Start	Finish	Resource Names
156	Ancillary Materials (Manipulatives) review rounds	60 days	Fri 7/1/16	Thu 9/22/16	Pearson
157	Document Development: Ancillary Materials – CDE Review Final	5 days	Fri 9/23/16	Thu 9/29/16	CDE
158	**Assessment Administration**	**520 days**	**Fri 7/1/16**	**Fri 6/29/18**	
159	**Orders for Materials**	**45 days**	**Mon 1/30/17**	**Fri 3/31/17**	
160	Pre-ID File Transfer	0 days	Mon 1/30/17	Mon 1/30/17	CDE
161	Materials Ordering System Operational	0 days	Mon 1/30/17	Mon 1/30/17	Pearson
162	Materials Ordering Window	20 days	Mon 1/30/17	Fri 2/24/17	Pearson
163	Online Rosters Generated	5 days	Mon 2/27/17	Fri 3/3/17	Pearson
164	Additional Materials Ordering Window	10 days	Mon 3/20/17	Fri 3/31/17	Pearson
165	**Test/Ancillary Material - Production**	**149 days**	**Fri 7/1/16**	**Wed 1/25/17**	
166	Proctors Manual Produced	15 days	Thu 1/5/17	Wed 1/25/17	Pearson
167	Test Booklets/Answer Documents Produced	15 days	Thu 1/5/17	Wed 1/25/17	Pearson
168	Ancillaries Produced	15 days	Fri 9/30/16	Thu 10/20/16	Pearson
169	Accommodated Materials Produced	20 days	Fri 7/1/16	Thu 7/28/16	Pearson
170	Certification Forms Produced	5 days	Fri 9/30/16	Thu 10/6/16	Pearson
171	**Packaging and Delivery**	**36 days**	**Mon 1/2/17**	**Mon 2/20/17**	
172	Colorado Districts in Shipping System	0 days	Mon 1/30/17	Mon 1/30/17	Pearson
173	Packaging Specifications Finalized	0 days	Mon 1/2/17	Mon 1/2/17	Pearson
174	Non-secure Materials Packaged	15 days	Thu 1/26/17	Wed 2/15/17	Pearson
175	Non-secure Materials Shipped	3 days	Thu 2/16/17	Mon 2/20/17	Pearson
176	Non-secure Materials in District	0 days	Mon 2/20/17	Mon 2/20/17	Pearson
177	Secure Materials Packaged	15 days	Thu 1/26/17	Wed 2/15/17	Pearson
178	Secure Materials Shipped	3 days	Thu 2/16/17	Mon 2/20/17	Pearson
179	Secure Materials in District	0 days	Mon 2/20/17	Mon 2/20/17	Pearson
180	**Test Administration**	**15 days**	**Mon 4/3/17**	**Fri 4/21/17**	
181	Operational On-line Test Administration Window - Science, Social Studies	15 days	Mon 4/3/17	Fri 4/21/17	
182	**Material Return and Verification**	**307 days**	**Tue 4/25/17**	**Fri 6/29/18**	
183	To Be Scored Materials Return Shipment	0 days	Tue 4/25/17	Tue 4/25/17	CO DISTRICTS
184	Not To Be Scored Materials Return Shipment	0 days	Mon 5/1/17	Mon 5/1/17	CO DISTRICTS
185	Non-scored Materials Destruction	0 days	Fri 12/29/17	Fri 12/29/17	Pearson
186	Scored Materials Destruction	0 days	Fri 6/29/18	Fri 6/29/18	Pearson
187	Secure Materials Verification – Initial Report	0 days	Mon 5/15/17	Mon 5/15/17	Pearson
188	Secure Materials Verification – Weekly Report	0 days	Mon 5/22/17	Mon 5/22/17	Pearson
189	Secure Materials Verification – Final Report	0 days	Mon 5/29/17	Mon 5/29/17	Pearson
190	**Test Monitoring**	**211 days**	**Fri 7/1/16**	**Fri 4/21/17**	
191	Test Monitoring Protocol review rounds	60 days	Fri 7/1/16	Thu 9/22/16	Pearson
192	Test Monitoring Protocol – CDE Review Final	5 days	Fri 9/23/16	Thu 9/29/16	CDE
193	Test Monitoring Sites Selected	0 days	Mon 1/16/17	Mon 1/16/17	Pearson
194	Test Monitoring Sites Notified – TBD if needed	0 days	Mon 2/13/17	Mon 2/13/17	Pearson

Colorado Summative Schedule - FY2017

ID	Task Name	Duration	Start	Finish	Resource Names
195	Test Monitoring	15 days	Mon 4/3/17	Fri 4/21/17	Pearson
196	**Web-Based Online Test Delivery System**	**171 days**	**Fri 7/1/16**	**Mon 2/27/17**	
197	**Online Readiness Assessment**	**20 days**	**Mon 9/19/16**	**Fri 10/14/16**	
198	Conduct the Online Readiness Assessment	5 days	Mon 9/19/16	Fri 9/23/16	Pearson
199	Online Readiness Assessment Results	5 days	Mon 9/26/16	Fri 9/30/16	Pearson
200	Infrastructure Plan - Final	10 days	Mon 10/3/16	Fri 10/14/16	Pearson
201	**Online Tutorials**	**171 days**	**Fri 7/1/16**	**Mon 2/27/17**	
202	Online Tutorials review rounds	30 days	Wed 1/4/17	Tue 2/14/17	Pearson
203	Online Tutorials – CDE Review Final	5 days	Wed 2/15/17	Tue 2/21/17	CDE
204	Online Tutorials Available for District Use	0 days	Mon 2/27/17	Mon 2/27/17	Pearson
205	Online Accommodations Functionality document review rounds	60 days	Fri 7/1/16	Thu 9/22/16	Pearson
206	Online Accommodations Functionality – CDE Review Final	5 days	Fri 9/23/16	Thu 9/29/16	CDE
207	**Online Test Delivery**	**157 days**	**Fri 7/1/16**	**Mon 2/6/17**	
208	Online Test Delivery System Demonstration	0 days	Mon 8/1/16	Mon 8/1/16	Pearson
209	Online Test Delivery System Testing	80 days	Mon 8/1/16	Fri 11/18/16	Pearson
210	Online Test Delivery System Available for District Installation/Download	0 days	Fri 11/18/16	Fri 11/18/16	Pearson
211	Forms Loaded in Online Test Delivery System	10 days	Thu 1/5/17	Wed 1/18/17	Pearson
212	Mitigation and Contingency Plans - Final	30 days	Fri 7/1/16	Thu 8/11/16	Pearson
213	Establish Unique Log-in ID and Passwords (CDE staff, technology directors, DACs, SACs, test proctors, students)	5 days	Mon 1/30/17	Fri 2/3/17	Pearson
214	Distribute Unique Log-in ID and Passowrds (CDE staff, technology directors, DACs, SACs, test proctors, students)	1 day	Mon 2/6/17	Mon 2/6/17	Pearson
215	**Scanning and Scoring**	**260 days**	**Fri 7/1/16**	**Thu 6/29/17**	
216	**Anchor Validation (from Spring 2016 Field Test)**	**81 days**	**Thu 8/18/16**	**Thu 12/8/16**	
217	Recruit Anchor Validation Participants	20 days	Thu 8/18/16	Wed 9/14/16	Pearson
218	Anchor Validation Meeting	3 days	Tue 9/27/16	Thu 9/29/16	Pearson
219	Scoring Decision Guide review rounds	45 days	Fri 9/30/16	Thu 12/1/16	Pearson
220	Scoring Decision Guide – CDE Review Final	5 days	Fri 12/2/16	Thu 12/8/16	CDE
221	**Scoring Processes**	**260 days**	**Fri 7/1/16**	**Thu 6/29/17**	
222	Scanning Specifications review rounds	20 days	Fri 7/1/16	Thu 7/28/16	Pearson
223	Scanning Specifications – CDE Review Final	5 days	Fri 7/29/16	Thu 8/4/16	CDE
224	Materials Scanned (1% accommodation)	3 days	Tue 5/2/17	Thu 5/4/17	Pearson
225	Key Verification – CDE Review	2 days	Wed 4/26/17	Thu 4/27/17	CDE
226	Alerts Resolved and Clean Post	3 days	Tue 5/2/17	Thu 5/4/17	Pearson
227	Operational Scoring Window	7 days	Fri 5/5/17	Mon 5/15/17	
228	**Rangefinding**	**34 days**	**Mon 4/17/17**	**Thu 6/1/17**	
229	Recruit Rangefinding Participants	20 days	Mon 4/17/17	Fri 5/12/17	
230	Rangefinding Meeting	3 days	Tue 5/30/17	Thu 6/1/17	
231	Scoring Staff Requirements Established	0 days	Fri 7/1/16	Fri 7/1/16	Pearson
232	Scoring Staff Recruitment and Hiring	20 days	Mon 3/6/17	Fri 3/31/17	Pearson

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ID	Task Name	Duration	Start	Finish	Resource Names
233	Scoring Training Materials review rounds	10 days	Fri 6/2/17	Thu 6/15/17	Pearson
234	Scoring Training Materials – CDE Review Final	3 days	Fri 6/16/17	Tue 6/20/17	CDE
235	Scoring Window	7 days	Wed 6/21/17	Thu 6/29/17	Pearson
236	Scoring Site Scheduled Visit - CDE	2 days	Fri 6/23/17	Mon 6/26/17	CDE
237	Reliability and Validity Scoring Specification/Procedures review rounds	30 days	Fri 7/1/16	Thu 8/11/16	Pearson
238	Reliability and Validity Scoring Specification/Procedures - CDE Review Final	5 days	Fri 8/12/16	Thu 8/18/16	CDE
239	Procedures for Unusual Responses - review rounds	30 days	Fri 7/1/16	Thu 8/11/16	Pearson
240	Procedures for Unusual Responses - CDE Review Final	5 days	Fri 8/12/16	Thu 8/18/16	CDE
241	Rescoring Specifications/Procedures review rounds	30 days	Fri 7/1/16	Thu 8/11/16	Pearson
242	Rescoring Specifications/Procedures - CDE Review Final	5 days	Fri 8/12/16	Thu 8/18/16	CDE
243	**Reporting of Data Files and Assessment Results**	**250 days**	**Fri 7/1/16**	**Thu 6/15/17**	
244	**Reporting Files - Specs**	**65 days**	**Fri 7/1/16**	**Thu 9/29/16**	
245	Reporting: Data File Layout review rounds	45 days	Fri 7/1/16	Thu 9/1/16	Pearson
246	Reporting: Score Report Shells review rounds	60 days	Fri 7/1/16	Thu 9/22/16	Pearson
247	Reporting: Individual Student Level File Layout - CDE Review Final	5 days	Fri 9/2/16	Thu 9/8/16	CDE
248	Reporting: Individual Student Level Report Shells – CDE Review Final	5 days	Fri 9/23/16	Thu 9/29/16	CDE
249	Reporting: State Level File Layouts – CDE Review Final	5 days	Fri 9/2/16	Thu 9/8/16	CDE
250	Reporting: District Level File Layouts – CDE Review Final	5 days	Fri 9/2/16	Thu 9/8/16	CDE
251	Reporting: District Level Report Shells – CDE Review Final	5 days	Fri 9/23/16	Thu 9/29/16	CDE
252	Reporting: School Level File Layouts – CDE Review Final	5 days	Fri 9/2/16	Thu 9/8/16	CDE
253	Reporting: School Level Report Shells – CDE Review Final	5 days	Fri 9/23/16	Thu 9/29/16	CDE
254	**Reports**	**30 days**	**Fri 5/5/17**	**Thu 6/15/17**	
255	Student Biographical Data Review Window	10 days	Fri 5/5/17	Thu 5/18/17	CO DISTRICTS
256	**Operational Reporting - Science, Social Studies**	**16 days**	**Thu 5/25/17**	**Thu 6/15/17**	
257	Reporting: QC of Individual Student Level File – CDE Review	1 day	Thu 5/25/17	Thu 5/25/17	CDE
258	Reporting: QC of Individual Student Level File – CDE Verification	0 days	Thu 5/25/17	Thu 5/25/17	CDE
259	Reporting: Individual Student Level File Posted	0 days	Thu 5/25/17	Thu 5/25/17	Pearson
260	Reporting: Individual Student Report Bellwethers	2 days	Wed 5/31/17	Thu 6/1/17	CDE
261	Reporting: Individual Student Level File Electronic Reports Posted	0 days	Tue 6/6/17	Tue 6/6/17	Pearson
262	Reporting: Individual Student Level Hard Copy Reports in District	0 days	Thu 6/15/17	Thu 6/15/17	Pearson
263	**State Level Files**	**8 days**	**Fri 5/19/17**	**Tue 5/30/17**	
264	Pearson updates scoring system and produces/verifies State Level File	6 days	Fri 5/19/17	Fri 5/26/17	Pearson
265	Reporting: QC of State Level File(s) – CDE Review	2 days	Mon 5/29/17	Tue 5/30/17	CDE
266	Reporting: QC of State Level File(s) – CDE Verification	0 days	Tue 5/30/17	Tue 5/30/17	CDE
267	Reporting: State Level File(s) Posted	0 days	Tue 5/30/17	Tue 5/30/17	Pearson
268	**District Level Files**	**10 days**	**Mon 5/29/17**	**Fri 6/9/17**	
269	Reporting: QC of District Level File(s) – CDE Review	2 days	Mon 5/29/17	Tue 5/30/17	CDE
270	Reporting: QC of District Level File(s) – CDE Verification	0 days	Tue 5/30/17	Tue 5/30/17	CDE
271	Reporting: District Level File(s) Posted	0 days	Tue 5/30/17	Tue 5/30/17	Pearson

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ID	Task Name	Duration	Start	Finish	Resource Names
272	Reporting: District Reports Bellwethers	2 days	Mon 6/5/17	Tue 6/6/17	CDE
273	Reporting: District Electronic Reports Posted	0 days	Fri 6/9/17	Fri 6/9/17	Pearson
274	**School Level Files**	**10 days**	**Mon 5/29/17**	**Fri 6/9/17**	
275	Reporting: QC of School Level File(s) – CDE Review	2 days	Mon 5/29/17	Tue 5/30/17	CDE
276	Reporting: QC of School Level File(s) – CDE Verification	0 days	Tue 5/30/17	Tue 5/30/17	CDE
277	Reporting: School Level File(s) Posted	0 days	Tue 5/30/17	Tue 5/30/17	Pearson
278	Reporting: School Reports Bellwethers	2 days	Mon 6/5/17	Tue 6/6/17	CDE
279	Reporting: School Electronic Reports Posted	0 days	Fri 6/9/17	Fri 6/9/17	Pearson
280	**Interpretive Guide**	**65 days**	**Fri 7/1/16**	**Thu 9/29/16**	
281	Interpretive Guide review rounds	60 days	Fri 7/1/16	Thu 9/22/16	Pearson
282	Assessment Interpretive Guide – Review Final	5 days	Fri 9/23/16	Thu 9/29/16	CDE
283	Assessment Interpretive Guide Posted	0 days	Thu 9/29/16	Thu 9/29/16	Pearson
284	**Psychometric, Research, and Technical Activities**	**292 days**	**Fri 7/1/16**	**Tue 8/15/17**	
285	**Field Test and Operational Analysis**	**250 days**	**Fri 7/1/16**	**Thu 6/15/17**	
286	Field Test- Sampling Design	60 days	Fri 7/1/16	Thu 9/22/16	Pearson
287	Psychometric Analysis of Field Test	30 days	Fri 5/5/17	Thu 6/15/17	Pearson
288	Operational Analysis	9 days	Mon 4/17/17	Thu 4/27/17	Pearson
289	CDE Review and Approval of Equating Results	1 day	Fri 4/28/17	Fri 4/28/17	CDE
290	**TAC Meetings**	**112 days**	**Tue 9/6/16**	**Wed 2/8/17**	
291	TAC Meeting 1	2 days	Tue 9/6/16	Wed 9/7/16	Pearson
292	TAC Meeting 2	2 days	Tue 12/6/16	Wed 12/7/16	Pearson
293	TAC Meeting 3	2 days	Tue 2/7/17	Wed 2/8/17	Pearson
294	**Technical Reports**	**72 days**	**Fri 5/5/17**	**Tue 8/15/17**	
295	Technical Report – Final version to CDE	0 days	Tue 8/15/17	Tue 8/15/17	Pearson
296	Irregularity and Data Forensic Report	10 days	Fri 5/5/17	Thu 5/18/17	Pearson
297	**Training and Support**	**176 days**	**Fri 7/1/16**	**Fri 3/3/17**	
298	Understanding Assessment Results Training Materials review rounds	20 days	Fri 7/1/16	Thu 7/28/16	Pearson
299	Understanding Assessment Results Training Material - CDE Final Review	5 days	Fri 7/29/16	Thu 8/4/16	CDE
300	Understanding Assessment Results Training	5 days	Mon 8/22/16	Fri 8/26/16	Pearson
301	Technology Director Training Material review rounds	60 days	Fri 7/1/16	Thu 9/22/16	Pearson
302	Technology Director Training Material CDE Review Final	5 days	Fri 9/23/16	Thu 9/29/16	CDE
303	Conduct Technology Director Training	5 days	Mon 2/6/17	Fri 2/10/17	Pearson
304	Assessment Administration Training Material review rounds	30 days	Mon 1/2/17	Fri 2/10/17	Pearson
305	Assessment Administration Training Material CDE Review Final	5 days	Mon 2/13/17	Fri 2/17/17	CDE
306	Conduct Assessment Administration Training	5 days	Mon 2/27/17	Fri 3/3/17	Pearson
307	**Customer Service**	**21 days**	**Thu 6/30/16**	**Thu 7/28/16**	
308	Customer feedback survey	0 days	Thu 6/30/16	Thu 6/30/16	Pearson
309	Establish DAC Website	20 days	Fri 7/1/16	Thu 7/28/16	Pearson
310	**"Tail" Activities**	**329 days**	**Wed 6/1/16**	**Tue 9/5/17**	

Colorado Summative Schedule - FY2017

ID	Task Name	Duration	Start	Finish	Resource Names
311	**Program Management**	**23 days**	**Thu 8/3/17**	**Tue 9/5/17**	
312	Project Meeting - Close out	2 days	Tue 8/15/17	Wed 8/16/17	Pearson
313	Transition Plan - End of Contract	0 days	Thu 8/31/17	Thu 8/31/17	Pearson
314	**Monthly Reports**	**23 days**	**Thu 8/3/17**	**Tue 9/5/17**	
315	Jul	0 days	Thu 8/3/17	Thu 8/3/17	Pearson
316	Aug	0 days	Tue 9/5/17	Tue 9/5/17	Pearson
317	**Assessment Development**	**327 days**	**Wed 6/1/16**	**Thu 8/31/17**	
318	**Content and Bias Review - Science, Social Studies (Spring 2018 Field Test)**	**54 days**	**Mon 6/19/17**	**Thu 8/31/17**	
319	Item Review – CDE Review (newly written items)	5 days	Mon 7/17/17	Fri 7/21/17	CDE
320	Recruit Content Review Participants	20 days	Mon 6/19/17	Fri 7/14/17	Pearson
321	ETS creates materials for Content and Bias/sensitivity Reviews	11 days	Fri 6/30/17	Fri 7/14/17	ETS
322	Content and Bias/Sensitivity Review Materials – CDE Review	3 days	Mon 7/17/17	Wed 7/19/17	CDE
323	Edit materials after CDE review	3 days	Thu 7/20/17	Mon 7/24/17	ETS
324	Content and Bias Review Meeting	3 days	Tue 7/25/17	Thu 7/27/17	ETS
325	ETS implements edits suggested by committee	25 days	Fri 7/28/17	Thu 8/31/17	ETS
326	ETS sends final results of Content and Bias Sensitivity Review meeting	0 days	Thu 8/31/17	Thu 8/31/17	ETS
327	**Data Review (for Spring 2018 Operational)**	**300 days**	**Wed 6/1/16**	**Tue 7/25/17**	
328	Recruit Data Review Participants	25 days	Wed 6/1/16	Tue 7/5/16	Pearson
329	ETS Prints Data Review Meeting Materials	12 days	Tue 6/13/17	Wed 6/28/17	ETS
330	Produce Data Review Materials – CDE Review	5 days	Thu 6/29/17	Wed 7/5/17	CDE
331	Edit materials after CDE review	3 days	Thu 7/6/17	Mon 7/10/17	ETS
332	Conduct Data Review meeting	1 day	Tue 7/11/17	Tue 7/11/17	ETS
333	ETS provides final results of Data Review Meetings	10 days	Wed 7/12/17	Tue 7/25/17	ETS

2013_CoAlt_SpringFT

	Name	Projected Start	Projected Finish	Duration	Resource Names	Notes
	1.0 PROJECT PLANNING AND COMMUNICATION					
	Quarterly Risk Review Meetings					
	Risk Review Q3	Mon 02/04/13	Mon 02/04/13	1 day	PMT,Pearson	
	Risk Review Q4	Mon 05/13/13	Mon 05/13/13	1 day	PMT,Pearson	
	Risk Review--Tail	Fri 08/30/13	Fri 08/30/13	1 day	PMT,Pearson	
	CoAlt Monthly Onsite Meetings					
	CoAlt Monthly Onsite Meeting--Jan	**Tue 01/22/13**	**Thu 01/31/13**	**8 days**		
	Agenda drafted	Tue 01/22/13	Wed 01/23/13	2 days	PMT	
	Agenda Delivered to CDE	Thu 01/24/13	Mon 01/28/13	3 days	PMT	
	Meeting Held (Denver)	Mon 01/28/13	Tue 01/29/13	2 days	PMT,CDE	
	Meeting Minutes Distributed	Wed 01/30/13	Thu 01/31/13	2 days	PMT	
	CoAlt Monthly Onsite Meeting--Feb	**Tue 02/05/13**	**Thu 02/14/13**	**8 days**		
	Agenda drafted	Tue 02/05/13	Wed 02/06/13	2 days	PMT	
	Agenda Delivered to CDE	Thu 02/07/13	Mon 02/11/13	3 days	PMT	
	Meeting Held (Denver)	Mon 02/11/13	Tue 02/12/13	2 days	PMT,CDE	
	Meeting Minutes Distributed	Wed 02/13/13	Thu 02/14/13	2 days	PMT	
	CoAlt Monthly Onsite Meeting--Mar	**Tue 03/05/13**	**Thu 03/14/13**	**8 days**		
	Agenda drafted	Tue 03/05/13	Wed 03/06/13	2 days	PMT	
	Agenda Delivered to CDE	Thu 03/07/13	Mon 03/11/13	3 days	PMT	
	Meeting Held (San Antonio)	Mon 03/11/13	Tue 03/12/13	2 days	PMT,CDE	
	Meeting Minutes Distributed	Wed 03/13/13	Thu 03/14/13	2 days	PMT	
	CoAlt Monthly Onsite Meeting--Apr	**Tue 04/09/13**	**Thu 04/18/13**	**8 days**		
	Agenda drafted	Tue 04/09/13	Wed 04/10/13	2 days	PMT	
	Agenda Delivered to CDE	Thu 04/11/13	Mon 04/15/13	3 days	PMT	
	Meeting Held (Denver)	Mon 04/15/13	Tue 04/16/13	2 days	PMT,CDE	
	Meeting Minutes Distributed	Wed 04/17/13	Thu 04/18/13	2 days	PMT	
	CoAlt Monthly Onsite Meeting--May	**Tue 05/07/13**	**Thu 05/16/13**	**8 days**		
	Agenda drafted	Tue 05/07/13	Wed 05/08/13	2 days	PMT	
	Agenda Delivered to CDE	Thu 05/09/13	Mon 05/13/13	3 days	PMT	
	Meeting Held (Denver)	Mon 05/13/13	Tue 05/14/13	2 days	PMT,CDE	
	Meeting Minutes Distributed	Wed 05/15/13	Thu 05/16/13	2 days	PMT	
	CoAlt Monthly Onsite Meeting--Jun	**Tue 06/04/13**	**Thu 06/13/13**	**8 days**		
	Agenda drafted	Tue 06/04/13	Wed 06/05/13	2 days	PMT	
	Agenda Delivered to CDE	Thu 06/06/13	Mon 06/10/13	3 days	PMT	
	Meeting Held (San Antonio)	Mon 06/10/13	Tue 06/11/13	2 days	PMT,CDE	
	Meeting Minutes Distributed	Wed 06/12/13	Thu 06/13/13	2 days	PMT	
	CoAlt Monthly Onsite Meeting--Jul	**Mon 07/01/13**	**Thu 07/11/13**	**8 days**		
	Agenda drafted	Mon 07/01/13	Tue 07/02/13	2 days	PMT	
	Agenda Delivered to CDE	Wed 07/03/13	Mon 07/08/13	3 days	PMT	
	Meeting Held (Denver)	Mon 07/08/13	Tue 07/09/13	2 days	PMT,CDE	
	Meeting Minutes Distributed	Wed 07/10/13	Thu 07/11/13	2 days	PMT	
	Monthly Reports					
	Dec	Fri 01/04/13	Fri 01/04/13	0 days	PMT	
	Jan	Tue 02/05/13	Tue 02/05/13	0 days	PMT	
	Feb	Tue 03/05/13	Tue 03/05/13	0 days	PMT	

	Mar	Wed 04/03/13	Wed 04/03/13	0 days	PMT	
	Apr	Fri 05/03/13	Fri 05/03/13	0 days	PMT	
	May	Wed 06/05/13	Wed 06/05/13	0 days	PMT	
	Jun	Wed 07/03/13	Wed 07/03/13	0 days	PMT	
	DAC					
	DAC Management 1	Wed 01/30/13	Thu 01/31/13	2 days	CDE	
	DAC Management 2	Wed 03/13/13	Thu 03/14/13	2 days	CDE	
	TAC	Mon 01/14/13	Tue 01/15/13	2 days	CDE,PMT,RS	
	Invoices					
	Invoice Q3	**Mon 03/18/13**	**Fri 03/29/13**	**10 days**		
	Q3 invoice to CDE	Fri 03/29/13	Fri 03/29/13	1 day	CDE	
	Invoice Q4	**Mon 06/03/13**	**Thu 06/13/13**	**9 days**		
	Q4 invoice to CDE	Thu 06/13/13	Thu 06/13/13	1 day	CDE	
	Customer Acceptance Tests (CAT) Preparation for PearsonAccess	**Wed 01/23/13**	**Wed 02/06/13**	**11 days**		
	Agenda	Wed 01/23/13	Fri 01/25/13	3 days	PMT,ITPM	
	Kickoff	Fri 02/08/13	Fri 02/08/13	1 day	PMT,CDE,ITPM	
	2.0 SUPPORTING DOCUMENTS AND TRAINING					
	Manuals					
	District/School Assessment Coordinator's Manual produced and posted to PearsonAccess	**Fri 12/21/12**	**Fri 02/22/13**			
	Examiner's Manual (Front portion of test book) Produced, handed off to design and posted to PearsonAccess	**Fri 12/21/12**	**Fri 01/18/13**			
	Assessment Interpretive Guide - CoAlt (memo for the FT) produced and posted to PearsonAccess	**Mon 03/04/13**	**Mon 05/06/13**	**46 days**		
	Certification Forms produced and approved	**Fri 12/21/12**	**Mon 01/14/13**			
	WebEx Trainings					
	PearsonAccess Training - What's Coming	**Fri 12/21/12**	**Fri 01/25/13**	**26 days**		
	Draft presentation materials and email invite	Fri 12/21/12	Wed 01/02/13		PMT	
	CDE review of training presentation materials and email invite	Thu 01/03/13	Wed 01/09/13	5 days	CDE	
	Finalize materials	Thu 01/10/13	Wed 01/16/13	5 days	PMT	
	CDE Approval	Thu 01/17/13	Fri 01/18/13	2 days	CDE	
	Training held by PMT	Tue 01/22/13	Fri 01/25/13	4 days	CDE,PMT,CO Districts	
	PearsonAccess Training - Getting Started	**Fri 01/04/13**	**Thu 02/07/13**	**24 days**		
	Draft presentation materials and email invite	Fri 01/04/13	Tue 01/15/13	8 days	PMT	
	CDE review of training presentation materials and email invite	Wed 01/16/13	Wed 01/23/13	5 days	CDE	
	Finalize materials	Thu 01/24/13	Wed 01/30/13	5 days	PMT	
	CDE Approval	Thu 01/31/13	Fri 02/01/13	2 days	CDE	
	Training held by PMT	Mon 02/04/13	Thu 02/07/13	4 days	PMT,CDE,CO Districts	
	PearsonAccess Training - Before Testing	**Mon 01/07/13**	**Thu 04/11/13**	**68 days**		
	Draft presentation materials and email invite	Mon 01/07/13	Fri 01/18/13	10 days	PMT	
	CDE review of training presentation materials and email invite	Tue 01/22/13	Mon 01/28/13	5 days	CDE	
	Finalize materials	Tue 01/29/13	Mon 02/04/13	5 days	PMT	
	CDE Approval	Tue 02/05/13	Wed 02/06/13	2 days	CDE	
	Training held by PMT	Mon 04/08/13	Thu 04/11/13	4 days	PMT,CDE,CO Districts	
	PearsonAccess Training - CoAlt Scorer Entry	**Mon 01/14/13**	**Fri 04/19/13**	**69 days**		
	Draft presentation materials and email invite	Mon 01/14/13	Mon 01/28/13	10 days	PMT	
	CDE review of training presentation materials and email invite	Tue 01/29/13	Mon 02/04/13	5 days	CDE	
	Finalize materials	Tue 02/05/13	Mon 02/11/13	5 days	PMT	

	CDE Approval	Tue 02/12/13	Wed 02/13/13	2 days	CDE	
	Training held by PMT	Mon 04/15/13	Fri 04/19/13	5 days	PMT,CDE,CO Districts	
	PearsonAccess Training - During Testing	**Tue 01/22/13**	**Fri 05/03/13**	**74 days**		
	Draft presentation materials and email invite	Tue 01/22/13	Mon 02/04/13	10 days	PMT	
	CDE review of training presentation materials and email invite	Tue 02/05/13	Mon 02/11/13	5 days	CDE	
	Finalize materials	Tue 02/12/13	Mon 02/18/13	5 days	PMT	
	CDE Approval	Tue 02/19/13	Wed 02/20/13	2 days	CDE	
	Training held by PMT	Mon 04/22/13	Fri 05/03/13	10 days	PMT,CDE,CO Districts	
	5.0 FORMS COMPOSITION					
	Science Gr5 Forms Composition (2 Unique FT forms)					
	Science Gr5 Rd 1					
	Science Gr5 Rd 1 Client review	Thu 01/03/13	Mon 01/07/13	3 days	CDE	
	Science Gr5 Rd 2	**Tue 01/08/13**	**Wed 01/30/13**	**16 days**		
	Science Gr5 Client review and approval received	Mon 01/28/13	Tue 01/29/13	2 days	CDE	
	Science Gr5 Vendor PDF	**Wed 01/30/13**	**Thu 01/31/13**	**2 days**		
	Science Gr5 Create and Proof vendor PDF and Internal review/approval	Wed 01/30/13	Thu 01/31/13	2 days	Design,PMT	
	Science Gr8 Forms Composition (2 Unique FT forms)					
	Science Gr8 Rd 1		**Tue 01/08/13**			
	Science Gr8 Rd 1 Client review	Fri 01/04/13	Tue 01/08/13	3 days	CDE	
	Science Gr8 Rd 2	**Wed 01/09/13**	**Thu 01/31/13**	**16 days**		
	Science Gr8 Client review and approval received	Tue 01/29/13	Wed 01/30/13	2 days	CDE	
	Science Gr8 Vendor PDF	**Thu 01/31/13**	**Mon 02/04/13**	**3 days**		
	Science Gr8 Create and Proof vendor PDF and internal review/approval	Thu 01/31/13	Mon 02/04/13	3 days	Design,PMT	
	Science Gr11 Forms Composition (2 Unique FT forms)		**Wed 02/13/13**			
	Science Gr11 Rd 1		**Thu 01/17/13**			
	Science Gr11 Rd 1 Client review	Fri 01/11/13	Wed 01/16/13	4 days	CDE	
	Science Gr11 Rd 2	**Fri 01/18/13**	**Mon 02/11/13**	**16 days**		
	Client review and approval received	Thu 02/07/13	Fri 02/08/13	2 days	CDE	
	Science Gr11 Vendor PDF	**Mon 02/11/13**	**Wed 02/13/13**	**3 days**		
	Science Gr11 Create and Proof vendor PDF and internal review/approval	Mon 02/11/13	Wed 02/13/13	3 days	Design,PMT	
	SS Gr4 Forms Composition (2 Unique FT forms)					
	SS Gr4 Rd 1		**Fri 01/11/13**			
	SS Gr4 Rd 1 Client review	Mon 01/07/13	Thu 01/10/13	4 days	CDE	
	SS Gr4 Rd 2	**Mon 01/14/13**	**Tue 02/05/13**	**16 days**		
	Client review and approval received	Fri 02/01/13	Mon 02/04/13	2 days	CDE	
	SS Gr4 Vendor PDF	**Tue 02/05/13**	**Wed 02/06/13**	**2 days**		
	Create and Proof vendor PDF and internal review/approval	Tue 02/05/13	Wed 02/06/13	2 days	Design,PMT	
	SS Gr7 Forms Composition (2 Unique FT forms)					
	SS Gr7 Rd 1		**Fri 01/18/13**			
	SS Gr7 Rd 1 Client review	Mon 01/14/13	Fri 01/18/13	5 days	CDE	
	SS Gr7 Rd 2	**Tue 01/22/13**	**Tue 02/12/13**	**16 days**		
	Client review and approval received	Fri 02/08/13	Mon 02/11/13	2 days	CDE	
	SS Gr7 Vendor PDF	**Tue 02/12/13**	**Thu 02/14/13**	**3 days**		
	Create and Proof vendor PDF and internal review/approval	Tue 02/12/13	Thu 02/14/13	3 days	Design,PMT	
	SS Gr11 Forms Composition (2 Unique FT forms)	**Thu 12/20/12**	**Wed 02/13/13**	**36 days**		
	SS Gr11 Rd 1	**Thu 12/20/12**	**Thu 01/17/13**	**18 days**		
	SS Gr11 Rd 1 Client review	Tue 01/15/13	Wed 01/16/13	2 days	CDE	
	SS Gr11 Rd 2	**Fri 01/18/13**	**Tue 02/12/13**	**17 days**		

	Science Gr11 Client review and approval received	Thu 02/07/13	Mon 02/11/13	3 days	CDE	
	SS Gr11 Vendor PDF	**Tue 02/12/13**	**Wed 02/13/13**	**2 days**		
	SS Gr11 Create and Proof vendor PDF and internal review/approval	Tue 02/12/13	Wed 02/13/13	2 days	Design,PMT	
	Customer approval of final page proofs complete	Thu 02/14/13	Thu 02/14/13	0 days	Stoplight	
	6.0 PEARSONACCESS ONLINE DESIGN AND SETUP					
	Training Site (PA Release 6.1.2)		**Mon 01/28/13**			
	Receive Summative and ALT ORG Files from CDE and deliver to IT	Mon 01/14/13	Mon 01/14/13	1 day	IT,CDE,CDE-Jessica	
	Training site goes live to CDE	Mon 01/28/13	Mon 01/28/13	1 day	ITPM,CDE,CO Districts	
	Operational Site (PA Release 6.2)					
	Customer Acceptance Testing (CAT Window)	Fri 02/08/13	Thu 02/28/13	15 days	PMT,CDE	
	PearsonAccess Go Live to CDE	Mon 03/11/13	Mon 03/11/13	0 days	ITPM,CDE,CO Districts	
	PearsonAccess User Load					
	CDE Approve PearsonAccess User Load Documents	Thu 01/03/13	Wed 01/09/13	5 days	CDE,CDE-Jessica	
	PearsonAccess User Manuals and Online Help					
	PearsonAccess Manuals - CDE review	Mon 01/14/13	Tue 01/15/13	2 days	CDE	
	PearsonAccess Manuals - CDE Final review	Fri 01/18/13	Tue 01/22/13	2 days	CDE	
	Post PearsonAccess Manuals as Resource	Wed 01/23/13	Mon 01/28/13	4 days	PMT	
	7.0 MATERIALS PRODUCTION	**Wed 01/30/13**	**Thu 03/07/13**	**26 days**		
	CM 6: Files to Print/Publish Complete	Thu 02/14/13	Thu 02/14/13	0 days	Stoplight	
	Print Test Books	**Thu 01/31/13**	**Thu 03/07/13**	**25 days**		
	Print Manipulatives (Response Option Cards)	**Fri 02/15/13**	**Wed 03/06/13**	**13 days**		
	Print Coordinators' Manual	**Fri 02/15/13**	**Thu 03/07/13**	**14 days**		
	8.0 PACKAGING AND DISTRIBUTION					
	CM 8: AIQ Acceptance Test for Packaging and Distribution (P&D) Complete	Mon 03/04/13	Mon 03/04/13	1 day	AIQ	
	CM 10: Sales Orders Imported into Oracle Production (Prod Order Import)	Wed 03/06/13	Wed 03/06/13	0 days	PC,PDD,PC Oper,PKG,TR,AV,Oracle,PMT	
	CM 11: Final Pack Blue Dot Complete	Mon 03/25/13	Mon 03/25/13	1 day	PKG	
	CM 12: Test Materials (Secure and non-secure) Due to the Customer/Due in District (DID)	Tue 04/02/13	Mon 04/08/13	5 days	Stoplight,CDE	
	Security Resolution	**Wed 05/22/13**	**Thu 05/22/14**	**254 days**		
	Nonscorable materials destruction (secure, unused)	Tue 12/03/13	Wed 12/04/13	2 days	PMT,CDE	
	Secure materials destruction (used)	Wed 05/21/14	Thu 05/22/14	2 days	PMT,CDE	
	Secure materials verification--initial report to CDE	Wed 05/22/13	Wed 05/22/13	0 days	PMT,CDE	
	Secure materials verification--weekly reports to CDE begin	Fri 05/31/13	Fri 05/31/13	1 day	PMT,CDE	
	Secure materials verification--final report to CDE	Mon 06/10/13	Mon 06/10/13	1 day	PMT,CDE	
	9.0 TEST ADMINISTRATION	**Thu 03/21/13**	**Tue 05/07/13**	**34 days**		
	CM 14: Test Administration Begins	Mon 04/22/13	Mon 04/22/13	0 days		
	CoAlt TEST ADMINISTRATION	Mon 04/22/13	Fri 05/03/13	10 days	CDE,CO Districts	
	Material Order/Tracking and Additional Orders	**Thu 03/21/13**	**Tue 05/07/13**	**34 days**		
	Districts Update Profiles (RSDUs, if offered)	Thu 03/21/13	Fri 05/03/13	32 days	CO Districts,CDE	
	ASSESSMENT NETWORK PROFILE UPDATE CLOSES (External/Field)	Fri 05/03/13	Fri 05/03/13	0 days	CO Districts,CDE	
	Additional Orders Window--Secure materials	Tue 04/09/13	Wed 05/01/13	17 days	CO Districts,CDE	
	Additional Orders Window--transportation materials	Tue 04/09/13	Tue 05/07/13	21 days	CO Districts,CDE	
	10.0 SCORING AND REPORTING	**Wed 01/30/13**	**Wed 05/29/13**	**85 days**		
	CM 22: AIQ Acceptance Test for Reporting Complete	Tue 03/26/13	Tue 03/26/13	0 days	AIQ	
	Final Student Data File	**Fri 02/08/13**	**Wed 05/29/13**	**78 days**		
	CM 20: All Scoring Complete	Tue 05/07/13	Tue 05/07/13	0 days	Stoplight	
	CM 17: AIQ Acceptance Test for Scoring Complete	Mon 05/20/13	Mon 05/20/13	0 days	Stoplight	

	CM 21: Student Data File Provided to Psychometric Team	Tue 05/21/13	Tue 05/21/13	1 day	ITPM	
	CM 24: Student Data File Due to Customer (CA Techs posts Final SDF to SFTP site)	Thu 05/23/13	Thu 05/23/13	0 days	Stoplight	
	PMT notifies CDE that State Final Student Data File is posted to SFTP	Thu 05/23/13	Thu 05/23/13	0 days	PMT,CDE,CDE-Jessica	
	Official Certification of Final SDF by CDE	Fri 05/24/13	Wed 05/29/13	3 days	CDE,CDE-Jessica	
	11.0 CoAlt CONTENT AND PSY POST-ADMIN ACTIVITIES					
	Scaling and Calibrating	**Mon 01/14/13**	**Wed 06/05/13**	**101 days**		
	CDE review/approval of calibration, scaling, equating specs	Tue 02/12/13	Mon 02/18/13	5 days	CDE,CDE-Jasmine	
	Data Review					
	Preparation for Data Review					
	Work with client to develop data review template/ book (or PDF) structure if required by CoAlt	Fri 03/16/12	TBD	1 day	RA[50%],RS[50%],CDE[50%],CDE-Jasmine[50%]	
	CDE Review/Approval of training materials and files	Wed 06/26/13	Tue 07/02/13	5 days	CDE,CDE-Jasmine	
	Data Review WebEx	Wed 07/10/13	Wed 07/10/13	1 day	RA,RS	
	Administration Summary	**Mon 05/13/13**	**Fri 07/19/13**	**48 days**		**administration Summary in place of the tech report.**
	Get approval for TOC	Tue 05/28/13	Thu 05/30/13	3 days	RA,RS, CDE	
	CDE Review/Feedback	Fri 06/28/13	Fri 07/05/13	5 days	CDE[50%],CDE-Jasmine[50%]	
	CDE Review/Approval of Administration Summary	Mon 07/15/13	Fri 07/19/13	5 days	CDE,CDE-Jasmine	
	12.0 POST PHASE REVIEWS (CUSTOMER-FACING)	**Mon 02/11/13**	**Thu 07/11/13**	**107 days**		
	Program Improvement Plan - Development	**Fri 03/01/13**	**Mon 03/11/13**	**7 days**		
	Improvement plan to CDE	Mon 03/11/13	Mon 03/11/13	1 day	PMT,CDE	
	Program Improvement Plan - Production	**Tue 04/16/13**	**Fri 04/26/13**	**8.5 days**		
	Improvement plan to CDE	Thu 04/25/13	Fri 04/26/13	1 day	PMT,CDE	
	Program Improvement Plan - Shipping and Receipt	**Tue 06/25/13**	**Wed 07/03/13**	**7 days**		
	Improvement plan to CDE	Wed 07/03/13	Wed 07/03/13	1 day	PMT,CDE	
	Program Improvement Plan - Administration	**Mon 05/20/13**	**Fri 05/31/13**	**8.5 days**		
	Improvement plan to CDE	Thu 05/30/13	Fri 05/31/13	1 day	PMT,CDE	
	Program Improvement Plan - Scoring, Reporting, and Psychometrics	**Thu 06/13/13**	**Fri 06/21/13**	**7 days**		
	Improvement plan to CDE	Fri 06/21/13	Fri 06/21/13	1 day	PMT,CDE	
	Program Improvement Plan - Data Processing	**Thu 06/13/13**	**Fri 06/21/13**	**7 days**		
	Improvement plan to CDE	Fri 06/21/13	Fri 06/21/13	1 day	PMT,CDE	
	Program Improvement Plan - Meetings	**Mon 05/13/13**	**Tue 05/21/13**	**7 days**		
	Improvement plan to CDE	Tue 05/21/13	Tue 05/21/13	1 day	PMT,CDE	
	External Post Project Review & Planning Meeting	Wed 07/10/13	Thu 07/11/13	2 days	PMT,CDE	
	District Coordinator Surveys	**Mon 02/11/13**	**Fri 05/17/13**	**70 days**		
	P&D Survey	**Mon 02/11/13**	**Fri 05/17/13**	**70 days**		
	Spring 2013 P&D Survey Reviewed and Approved by CDE	Mon 05/13/13	Fri 05/17/13	5 days	CDE	
	13.0 CoAlt Item Writer Workshops (IWW)					
	IWW #1	**Tue 03/26/13**	**Wed 03/27/13**	**2 days**	CDE, Pearson	
	IWW #2	**Tue 06/18/13**	**Wed 06/19/13**	**2 days**	CDE, Pearson	
	Item Review	Sept. 2013	TBD	**2 days**	CDE, Pearson	

Exhibit B — Colorado Alternate Schedule - FY2014

ID	Task Name	Duration	Start	Finish	Resource Names
0	**Key Activities for CoAlt Assessments**	**585 days**	**Mon 6/3/13**	**Mon 8/31/15**	
1	**START**	**585 days**	**Mon 6/3/13**	**Mon 8/31/15**	
2	**General**	**5 days**	**Mon 7/1/13**	**Fri 7/5/13**	
3	Security Plan updated and rebaselined	5 days	Mon 7/1/13	Fri 7/5/13	Pearson
4	**Program Management**	**304 days**	**Mon 7/1/13**	**Fri 8/29/14**	
5	**Project Schedule**	**5 days**	**Mon 7/1/13**	**Fri 7/5/13**	
6	Project Schedule - CDE Review	3 days	Mon 7/1/13	Wed 7/3/13	CDE
7	Project Schedule - CDE and Pearson Joint Review	1 day	Thu 7/4/13	Thu 7/4/13	Pearson/CDE
8	Project Schedule Baselined	1 day	Fri 7/5/13	Fri 7/5/13	Pearson
9	**Project Meetings**	**253 days**	**Mon 7/1/13**	**Wed 6/18/14**	
10	**Project Meeting 1**	**13 days**	**Mon 7/1/13**	**Wed 7/17/13**	
11	Agenda Drafted and Delivered to CDE	2 days	Mon 7/1/13	Tue 7/2/13	Pearson
12	Meeting held (Denver, CO)	2 days	Tue 7/9/13	Wed 7/10/13	
13	Meeting Minutes Distributed	5 days	Thu 7/11/13	Wed 7/17/13	Pearson
14	**Project Meeting 2**	**15 days**	**Thu 8/1/13**	**Wed 8/21/13**	
15	Agenda Drafted and Delivered to CDE	2 days	Thu 8/1/13	Fri 8/2/13	Pearson
16	Meeting held (Denver, CO)	2 days	Tue 8/13/13	Wed 8/14/13	
17	Meeting Minutes Distributed	5 days	Thu 8/15/13	Wed 8/21/13	Pearson
18	**Project Meeting 3 - In person**	**13 days**	**Mon 9/2/13**	**Wed 9/18/13**	
19	Agenda Drafted and Delivered to CDE	2 days	Mon 9/2/13	Tue 9/3/13	Pearson
20	Meeting held (San Antonio, TX)	2 days	Tue 9/10/13	Wed 9/11/13	
21	Meeting Minutes Distributed	5 days	Thu 9/12/13	Wed 9/18/13	Pearson
22	**Project Meeting 4**	**12 days**	**Tue 10/1/13**	**Wed 10/16/13**	
23	Agenda Drafted and Delivered to CDE	2 days	Tue 10/1/13	Wed 10/2/13	Pearson
24	Meeting held (Denver, CO)	2 days	Tue 10/8/13	Wed 10/9/13	
25	Meeting Minutes Distributed	5 days	Thu 10/10/13	Wed 10/16/13	Pearson
26	**Project Meeting 5**	**14 days**	**Fri 11/1/13**	**Wed 11/20/13**	
27	Agenda Drafted and Delivered to CDE	2 days	Fri 11/1/13	Mon 11/4/13	Pearson
28	Meeting held (Denver, CO)	2 days	Tue 11/12/13	Wed 11/13/13	
29	Meeting Minutes Distributed	5 days	Thu 11/14/13	Wed 11/20/13	Pearson
30	**Project Meeting 6 - In person**	**13 days**	**Mon 12/2/13**	**Wed 12/18/13**	
31	Agenda Drafted and Delivered to CDE	2 days	Mon 12/2/13	Tue 12/3/13	Pearson
32	Meeting held (San Antonio, TX)	2 days	Tue 12/10/13	Wed 12/11/13	
33	Meeting Minutes Distributed	5 days	Thu 12/12/13	Wed 12/18/13	Pearson
34	**Project Meeting 7**	**16 days**	**Wed 1/1/14**	**Wed 1/22/14**	
35	Agenda Drafted and Delivered to CDE	2 days	Wed 1/1/14	Thu 1/2/14	Pearson
36	Meeting held (Denver, CO)	2 days	Tue 1/14/14	Wed 1/15/14	
37	Meeting Minutes Distributed	5 days	Thu 1/16/14	Wed 1/22/14	Pearson
38	**Project Meeting 8**	**13 days**	**Mon 2/3/14**	**Wed 2/19/14**	
39	Agenda Drafted and Delivered to CDE	2 days	Mon 2/3/14	Tue 2/4/14	Pearson
40	Meeting held (Denver, CO)	2 days	Tue 2/11/14	Wed 2/12/14	
41	Meeting Minutes Distributed	5 days	Thu 2/13/14	Wed 2/19/14	Pearson
42	**Project Meeting 9 - In person**	**13 days**	**Mon 3/3/14**	**Wed 3/19/14**	
43	Agenda Drafted and Delivered to CDE	2 days	Mon 3/3/14	Tue 3/4/14	Pearson
44	Meeting held (San Antonio, TX)	2 days	Tue 3/11/14	Wed 3/12/14	
45	Meeting Minutes Distributed	5 days	Thu 3/13/14	Wed 3/19/14	Pearson
46	**Project Meeting 10**	**12 days**	**Tue 4/1/14**	**Wed 4/16/14**	

ID	Task Name	Duration	Start	Finish	Resource Names
47	Agenda Drafted and Delivered to CDE	2 days	Tue 4/1/14	Wed 4/2/14	Pearson
48	Meeting held (Denver, CO)	2 days	Tue 4/8/14	Wed 4/9/14	
49	Meeting Minutes Distributed	5 days	Thu 4/10/14	Wed 4/16/14	Pearson
50	**Project Meeting 11**	**15 days**	**Thu 5/1/14**	**Wed 5/21/14**	
51	Agenda Drafted and Delivered to CDE	2 days	Thu 5/1/14	Fri 5/2/14	Pearson
52	Meeting held (Denver, CO)	2 days	Tue 5/13/14	Wed 5/14/14	
53	Meeting Minutes Distributed	5 days	Thu 5/15/14	Wed 5/21/14	Pearson
54	**Project Meeting 12 - In person**	**13 days**	**Mon 6/2/14**	**Wed 6/18/14**	
55	Agenda Drafted and Delivered to CDE	2 days	Mon 6/2/14	Tue 6/3/14	Pearson
56	Meeting held (San Antonio, TX)	2 days	Tue 6/10/14	Wed 6/11/14	
57	Meeting Minutes Distributed	5 days	Thu 6/12/14	Wed 6/18/14	Pearson
58	**Monthy Reports**	**238 days**	**Mon 8/5/13**	**Thu 7/3/14**	
59	Jul	0 days	Mon 8/5/13	Mon 8/5/13	Pearson
60	Aug	0 days	Wed 9/4/13	Wed 9/4/13	Pearson
61	Sep	0 days	Thu 10/3/13	Thu 10/3/13	Pearson
62	Oct	0 days	Tue 11/5/13	Tue 11/5/13	Pearson
63	Nov	0 days	Wed 12/4/13	Wed 12/4/13	Pearson
64	Dec	0 days	Mon 1/6/14	Mon 1/6/14	Pearson
65	Jan	0 days	Wed 2/5/14	Wed 2/5/14	Pearson
66	Feb	0 days	Wed 3/5/14	Wed 3/5/14	Pearson
67	Mar	0 days	Thu 4/3/14	Thu 4/3/14	Pearson
68	Apr	0 days	Mon 5/5/14	Mon 5/5/14	Pearson
69	May	0 days	Wed 6/4/14	Wed 6/4/14	Pearson
70	Jun	0 days	Thu 7/3/14	Thu 7/3/14	Pearson
71	**DAC**	**107 days**	**Wed 10/16/13**	**Thu 3/13/14**	
72	DAC Academy	2 days	Wed 2/19/14	Thu 2/20/14	Pearson
73	DAC Management 1	2 days	Wed 10/16/13	Thu 10/17/13	Pearson
74	DAC Management 2	2 days	Wed 3/12/14	Thu 3/13/14	Pearson
75	**Program Improvement**	**235 days**	**Mon 7/1/13**	**Fri 5/23/14**	
76	Program Improvement Plan - Development	15 days	Mon 12/16/13	Fri 1/3/14	Pearson
77	Program Improvement Plan - Production	15 days	Mon 1/13/14	Fri 1/31/14	Pearson
78	Program Improvement Plan - Shipping and Receipt	15 days	Tue 4/1/14	Mon 4/21/14	Pearson
79	Program Improvement Plan - Administration	15 days	Mon 5/5/14	Fri 5/23/14	Pearson
80	Program Improvement Plan - Scanning	15 days	Mon 11/11/13	Fri 11/29/13	Pearson
81	Program Improvement Plan - Scoring	15 days	Mon 7/1/13	Fri 7/19/13	Pearson
82	Program Improvement Plan - Data Processing	15 days	Thu 2/6/14	Wed 2/26/14	Pearson
83	Program Improvement Plan - Reporting and Psychometrics	15 days	Tue 8/20/13	Mon 9/9/13	Pearson
84	Program Improvement Plan - Meetings	15 days	Thu 8/22/13	Wed 9/11/13	Pearson
85	**Invoices**	**239 days**	**Mon 9/30/13**	**Fri 8/29/14**	
86	Invoice Q1	0 days	Mon 9/30/13	Mon 9/30/13	Pearson
87	Invoice Q2	0 days	Tue 12/31/13	Tue 12/31/13	Pearson
88	Invoice Q3	0 days	Mon 3/31/14	Mon 3/31/14	Pearson
89	Invoice Q4	0 days	Fri 6/13/14	Fri 6/13/14	Pearson
90	Invoice - "tail"	0 days	Fri 8/29/14	Fri 8/29/14	Pearson
91	**Assessment Development**	**303 days**	**Mon 6/3/13**	**Wed 7/30/14**	
92	**Documents - Development Specs**	**74 days**	**Mon 7/1/13**	**Thu 10/10/13**	
93	Eligible Content Document - Final	1 day	Mon 7/1/13	Mon 7/1/13	Pearson

ID	Task Name	Duration	Start	Finish	Resource Names
94	Claims Document - Final	1 day	Thu 8/1/13	Thu 8/1/13	Pearson
95	Reporting Categories Document - Final	1 day	Fri 8/9/13	Fri 8/9/13	Pearson
96	Assessment Framework - Final	1 day	Fri 8/16/13	Fri 8/16/13	Pearson
97	Performance Level Descriptors – General - Final	5 days	Fri 8/30/13	Thu 9/5/13	Pearson
98	Performance Level Descriptors – Grade Level Specific - Final	1 day	Thu 10/10/13	Thu 10/10/13	Pearson
99	Test Blueprints/Specifications - Final	0 days	Mon 7/1/13	Mon 7/1/13	Pearson
100	**Style Guide**	**30 days**	**Mon 7/1/13**	**Fri 8/9/13**	
101	Colorado Style Guide - Draft	30 days	Mon 7/1/13	Fri 8/9/13	Pearson
102	Colorado Style Guide - Final for year	0 days	Fri 8/9/13	Fri 8/9/13	Pearson
103	**Item Development**	**133 days**	**Mon 1/27/14**	**Wed 7/30/14**	
104	Item Writer Recruiting	25 days	Mon 1/27/14	Fri 2/28/14	Pearson
105	Develop Training Materials and Item Development Plans	5 days	Tue 2/11/14	Mon 2/17/14	Pearson
106	Item Development Training Meeting 1 Materials – CDE Review	5 days	Tue 2/18/14	Mon 2/24/14	CDE
107	Edit and ship materials after CDE review	10 days	Tue 2/25/14	Mon 3/10/14	Pearson
108	Item Development Meeting 1	2 days	Tue 3/11/14	Wed 3/12/14	Pearson
109	provides developers feedback	43 days	Fri 3/14/14	Tue 5/13/14	Pearson
110	develops training materials and item development plans (meeting 2)	5 days	Wed 5/14/14	Tue 5/20/14	Pearson
111	Item Writer Recruiting	25 days	Mon 4/28/14	Fri 5/30/14	Pearson
112	Item Development Meeting 2 Materials – CDE Review	3 days	Wed 5/21/14	Fri 5/23/14	CDE
113	Edit and ship materials after CDE review	10 days	Mon 5/26/14	Fri 6/6/14	Pearson
114	Item Development Meeting 2	2 days	Tue 6/10/14	Wed 6/11/14	Pearson
115	conducts internal Content and Editorial Reviews	30 days	Thu 6/12/14	Wed 7/23/14	Pearson
116	Item Review – CDE Review	5 days	Thu 7/24/14	Wed 7/30/14	CDE
117	Content Review and bias and sensitivity review (and PLD) Meeting	**69 days**	**Mon 7/1/13**	**Thu 10/3/13**	
118	Item Review – CDE Review	5 days	Mon 8/26/13	Fri 8/30/13	CDE
119	Recruit Content Review Participants	25 days	Mon 7/1/13	Fri 8/2/13	Pearson
120	Create training materials for Content and PLD Meetings	7 days	Mon 7/22/13	Tue 7/30/13	Pearson
121	Content and PLD Meeting training Materials – CDE Review	4 days	Wed 7/31/13	Mon 8/5/13	CDE
122	Edit and ship materials after CDE review	10 days	Tue 8/6/13	Mon 8/19/13	Pearson
123	Content and PLD Meeting	2 days	Tue 8/20/13	Wed 8/21/13	Pearson
124	implement edits suggested by committee	30 days	Fri 8/23/13	Thu 10/3/13	Pearson
125	**Data Review (for Spring 2014 Operational)**	**40 days**	**Mon 6/3/13**	**Fri 7/26/13**	
126	Recruit Data Review Participants	25 days	Mon 6/3/13	Fri 7/5/13	Pearson
127	Prints Data Review Training Materials	5 days	Tue 6/11/13	Mon 6/17/13	Pearson
128	Produce Data Review Training Materials – CDE Review	4 days	Tue 6/18/13	Fri 6/21/13	CDE
129	Edit and ship materials after CDE review	10 days	Mon 6/24/13	Fri 7/5/13	Pearson
130	Conduct Data Review meeting	1 day	Tue 7/9/13	Tue 7/9/13	Pearson
131	implements edits suggested by committee	10 days	Fri 7/12/13	Thu 7/25/13	Pearson
132	provides final results of Data Review Meetings	1 day	Fri 7/26/13	Fri 7/26/13	Pearson
133	**Form Development (Spring 2014 Operationa)**	**121 days**	**Mon 7/1/13**	**Mon 12/16/13**	
134	**Core Test Form Development**	**47 days**	**Mon 7/29/13**	**Tue 10/1/13**	
135	constructs forms	32 days	Mon 7/29/13	Tue 9/10/13	Pearson
136	CDE reviews forms	5 days	Wed 9/11/13	Tue 9/17/13	CDE
137	revises forms based on CDE review	5 days	Wed 9/18/13	Tue 9/24/13	Pearson
138	Core Test Form Development – CDE Review Final	5 days	Wed 9/25/13	Tue 10/1/13	CDE
139	Core Test Form Development – Final	0 days	Tue 10/1/13	Tue 10/1/13	Pearson
140	**Embedded Field Test Form Development**	**54 days**	**Wed 10/2/13**	**Mon 12/16/13**	

ID	Task Name	Duration	Start	Finish	Resource Names
141	constructs forms	40 days	Wed 10/2/13	Tue 11/26/13	Pearson
142	CDE reviews forms	5 days	Tue 11/26/13	Mon 12/2/13	CDE
143	revises forms based on CDE review	5 days	Tue 12/3/13	Mon 12/9/13	Pearson
144	Embedded Field Test Form Development – Final	5 days	Tue 12/10/13	Mon 12/16/13	CDE
145	Files to print	0 days	Mon 12/16/13	Mon 12/16/13	Pearson
146	Special Populations	65 days	Mon 7/1/13	Fri 9/27/13	
147	Accommodations Procedures Manual review rounds	60 days	Mon 7/1/13	Fri 9/20/13	Pearson
148	Accommodations Procedures Manual - CDE Review Final	5 days	Mon 9/23/13	Fri 9/27/13	CDE
149	**Certification for District Translators**	**65 days**	**Mon 7/1/13**	**Fri 9/27/13**	
150	Procedures document produced	60 days	Mon 7/1/13	Fri 9/20/13	Pearson
151	Procedures for Certification for District Translators – CDE Review Final	5 days	Mon 9/23/13	Fri 9/27/13	CDE
152	**Test Ancillary Material - Development**	**131 days**	**Mon 7/1/13**	**Mon 12/30/13**	
153	District and School Assessment Coordinator review rounds	60 days	Mon 7/1/13	Fri 9/20/13	Pearson
154	Document Development: District and School Assessment Coordinators Manual – CDE Review Final	5 days	Mon 9/23/13	Fri 9/27/13	CDE
155	Examiners Manual review rounds	30 days	Mon 10/21/13	Fri 11/29/13	Pearson
156	Document Development: Examiners Manual – CDE Review Final	5 days	Mon 12/2/13	Fri 12/6/13	CDE
157	Certification Forms review rounds	60 days	Mon 7/1/13	Fri 9/20/13	Pearson
158	Document Development: Certification Forms – CDE Review Final	5 days	Mon 9/23/13	Fri 9/27/13	CDE
159	Answer Document review rounds	45 days	Mon 7/1/13	Fri 8/30/13	Pearson
160	Document Development: Answer Document Layout - CDE Review Final	5 days	Mon 9/2/13	Fri 9/6/13	CDE
161	Document Development: Test Booklets/Answer Documents – CDE Review Final	5 days	Tue 12/24/13	Mon 12/30/13	CDE
162	Ancillary Materials (Manipulatives) review rounds	60 days	Mon 7/1/13	Fri 9/20/13	Pearson
163	Document Development: Ancillary Materials – CDE Review Final	5 days	Mon 9/23/13	Fri 9/27/13	CDE
164	**Assessment Administration**	**565 days**	**Mon 7/1/13**	**Mon 8/31/15**	
165	**Orders for Materials**	**83 days**	**Thu 1/2/14**	**Mon 4/28/14**	
166	Pre-ID/registration (org file) File Transfer	0 days	Thu 1/2/14	Thu 1/2/14	CDE
167	Materials Ordering System Operational	0 days	Thu 1/2/14	Thu 1/2/14	Pearson
168	Additional Materials Ordering Window	20 days	Tue 4/1/14	Mon 4/28/14	Pearson
169	**Test and Ancillary Material - Production**	**75 days**	**Mon 9/30/13**	**Fri 1/10/14**	
170	Test Booklets Produced	20 days	Mon 12/16/13	Fri 1/10/14	Pearson
171	Ancillaries Produced	15 days	Mon 9/30/13	Fri 10/18/13	Pearson
172	Certification Forms Produced	5 days	Mon 9/30/13	Fri 10/4/13	Pearson
173	**Packaging and Delivery**	**63 days**	**Thu 1/2/14**	**Mon 3/31/14**	
174	Colorado Districts in Shipping System	0 days	Mon 2/3/14	Mon 2/3/14	Pearson
175	Packaging Specifications Finalized	0 days	Thu 1/2/14	Thu 1/2/14	Pearson
176	Non-secure Materials Packaged	10 days	Tue 2/18/14	Mon 3/3/14	Pearson
177	Non-secure Materials Shipped	4 days	Wed 3/26/14	Mon 3/31/14	Pearson
178	Non-secure Materials in District	0 days	Mon 3/31/14	Mon 3/31/14	Pearson
179	Secure Materials Packaged	10 days	Tue 2/18/14	Mon 3/3/14	Pearson
180	Secure Materials Shipped	3 days	Wed 3/26/14	Fri 3/28/14	Pearson
181	Secure Materials in District	0 days	Mon 3/31/14	Mon 3/31/14	Pearson
182	**Test Administration**	**15 days**	**Mon 4/14/14**	**Fri 5/2/14**	
183	Operational Test Administration Window	15 days	Mon 4/14/14	Fri 5/2/14	
184	Online Score Submission Window	15 days	Mon 4/14/14	Fri 5/2/14	
185	**Material Return and Verification**	**343 days**	**Tue 5/6/14**	**Mon 8/31/15**	
186	Not To Be Scored Materials Return Shipment	0 days	Tue 5/6/14	Tue 5/6/14	Pearson
187	Non-scored Materials Destruction	0 days	Mon 3/2/15	Mon 3/2/15	Pearson

ID	Task Name	Duration	Start	Finish	Resource Names
188	Scored Materials Destruction	0 days	Mon 8/31/15	Mon 8/31/15	Pearson
189	Secure Materials Verification – Initial Report	0 days	Tue 5/20/14	Tue 5/20/14	Pearson
190	Secure Materials Verification – Weekly Report	0 days	Tue 5/27/14	Tue 5/27/14	Pearson
191	Secure Materials Verification – Final Report	0 days	Tue 6/3/14	Tue 6/3/14	Pearson
192	**Test Monitoring**	**220 days**	**Mon 7/1/13**	**Fri 5/2/14**	
193	Test Monitoring Protocol review rounds	60 days	Mon 7/1/13	Fri 9/20/13	Pearson
194	Test Monitoring Protocol – CDE Review Final	5 days	Mon 9/23/13	Fri 9/27/13	CDE
195	Test Monitoring Sites Selected	0 days	Wed 1/15/14	Wed 1/15/14	Pearson
196	Test Monitoring Sites Notified – TBD if needed	0 days	Fri 2/14/14	Fri 2/14/14	Pearson
197	Test Monitoring	15 days	Mon 4/14/14	Fri 5/2/14	Pearson
198	**Scoring**	**224 days**	**Mon 7/1/13**	**Thu 5/8/14**	
199	Scoring Procedures review rounds	40 days	Mon 7/1/13	Fri 8/23/13	Pearson
200	Scoring Procedures - CDE Review Final	5 days	Mon 8/26/13	Fri 8/30/13	CDE
201	Scoring Materials review rounds	50 days	Mon 9/2/13	Fri 11/8/13	Pearson
202	Scoring Materials - CDE Review Final	5 days	Fri 5/2/14	Thu 5/8/14	CDE
203	Scoring Monitors Recruitment	25 days	Thu 1/2/14	Wed 2/5/14	Pearson
204	Scoring Monitors Training	3 days	Thu 2/6/14	Mon 2/10/14	Pearson
205	**Online Score Submission System**	**45 days**	**Mon 2/3/14**	**Mon 4/7/14**	
206	Pearson Online Scorer Entry Training Center Available for District Use	0 days	Mon 2/3/14	Mon 2/3/14	Pearson
207	Online scoring system ready for CDE review	0 days	Mon 3/24/14	Mon 3/24/14	Pearson
208	Online Score Submission System - GO LIVE	0 days	Mon 4/7/14	Mon 4/7/14	Pearson
209	Scoring Guidance Document review rounds	51 days	Mon 7/1/13	Mon 9/9/13	Pearson
210	Scoring Guidance Document - CDE review	5 days	Tue 9/10/13	Mon 9/16/13	CDE
211	Scoring Guidance - Available to Classroom Teachers	0 days	Mon 9/16/13	Mon 9/16/13	Pearson
212	**Reporting of Data Files and Assessment Results**	**287 days**	**Mon 7/1/13**	**Tue 8/5/14**	
213	**Reporting Files - Specs**	**25 days**	**Mon 7/1/13**	**Fri 8/2/13**	
214	Reporting: Data File Layout review rounds	20 days	Mon 7/1/13	Fri 7/26/13	Pearson
215	Reporting: Score Report Shells review rounds	20 days	Mon 7/1/13	Fri 7/26/13	Pearson
216	Reporting: Individual Student Level File Layout - CDE Review Final	5 days	Mon 7/29/13	Fri 8/2/13	CDE
217	Reporting: Individual Student Level Report Shells – CDE Review Final	5 days	Mon 7/29/13	Fri 8/2/13	CDE
218	Reporting: State Level File Layouts – CDE Review Final	5 days	Mon 7/29/13	Fri 8/2/13	CDE
219	Reporting: District Level File Layouts – CDE Review Final	5 days	Mon 7/29/13	Fri 8/2/13	CDE
220	Reporting: District Level Report Shells – CDE Review Final	5 days	Mon 7/29/13	Fri 8/2/13	CDE
221	Reporting: School Level File Layouts – CDE Review Final	5 days	Mon 7/29/13	Fri 8/2/13	CDE
222	Reporting: School Level Report Shells – CDE Review Final	5 days	Mon 7/29/13	Fri 8/2/13	CDE
223	**Reports**	**218 days**	**Wed 7/17/13**	**Fri 5/16/14**	
224	Student Biographical Data Review Window	10 days	Mon 5/5/14	Fri 5/16/14	CO DISTRICTS
225	Reporting: QC of Individual Student Level File – CDE Review	2 days	Wed 7/17/13	Thu 7/18/13	CDE
226	Reporting: QC of Individual Student Level File – CDE Verification	0 days	Thu 7/18/13	Thu 7/18/13	CDE
227	Reporting: Individual Student Level File Posted	0 days	Thu 7/18/13	Thu 7/18/13	Pearson
228	Reporting: Individual Student Report Bellwethers	2 days	Wed 7/24/13	Thu 7/25/13	CDE
229	Reporting: Individual Student Level File Electronic Reports Posted	0 days	Mon 7/29/13	Mon 7/29/13	Pearson
230	Reporting: Individual Student Level Hard Copy Reports in District	0 days	Tue 8/20/13	Tue 8/20/13	Pearson
231	**State Level Files**	**14 days**	**Tue 7/9/13**	**Mon 7/29/13**	
232	Pearson updates scoring system and produces/verifies State Level File	6 days	Tue 7/9/13	Tue 7/16/13	Pearson
233	Reporting: QC of State Level File(s) – CDE Review	2 days	Wed 7/17/13	Thu 7/18/13	CDE
234	Reporting: QC of State Level File(s) – CDE Verification	0 days	Thu 7/18/13	Thu 7/18/13	CDE

ID	Task Name	Duration	Start	Finish	Resource Names
235	Reporting: State Level File(s) Posted	0 days	Mon 7/29/13	Mon 7/29/13	Pearson
236	**District Level Files**	**16 days**	**Wed 7/17/13**	**Thu 8/8/13**	
237	Reporting: QC of District Level File(s) – CDE Review	2 days	Wed 7/17/13	Thu 7/18/13	CDE
238	Reporting: QC of District Level File(s) – CDE Verification	0 days	Thu 7/18/13	Thu 7/18/13	CDE
239	Reporting: District Level File(s) Posted	0 days	Thu 7/18/13	Thu 7/18/13	Pearson
240	Reporting: District Reports Bellwethers	2 days	Wed 7/24/13	Thu 7/25/13	CDE
241	Reporting: District Electronic Reports Posted	0 days	Thu 8/8/13	Thu 8/8/13	Pearson
242	**School Level Files**	**11 days**	**Wed 7/17/13**	**Wed 7/31/13**	
243	Reporting: QC of School Level File(s) – CDE Review	2 days	Wed 7/17/13	Thu 7/18/13	CDE
244	Reporting: QC of School Level File(s) – CDE Verification	0 days	Thu 7/18/13	Thu 7/18/13	CDE
245	Reporting: School Level File(s) Posted	0 days	Thu 7/18/13	Thu 7/18/13	Pearson
246	Reporting: School Electronic Reports Posted	0 days	Wed 7/31/13	Wed 7/31/13	Pearson
247	**Interpretive Guide**	**67 days**	**Mon 5/5/14**	**Tue 8/5/14**	
248	Interpretive Guide review rounds	57 days	Mon 5/5/14	Tue 7/22/14	Pearson
249	Assessment Interpretive Guide – Review Final	5 days	Wed 7/23/14	Tue 7/29/14	CDE
250	Assessment Interpretive Guide Posted	5 days	Wed 7/30/14	Tue 8/5/14	Pearson
251	**Psychometric, Research, and Technical Activities**	**294 days**	**Mon 7/1/13**	**Fri 8/15/14**	
252	**Field Test and Operational Analysis**	**264 days**	**Mon 7/1/13**	**Thu 7/3/14**	
253	Field Test- Sampling Design	60 days	Mon 7/1/13	Fri 9/20/13	Pearson
254	Psychometric Analysis of Field Test	30 days	Fri 5/23/14	Thu 7/3/14	Pearson
255	Operational Analysis	10 days	Fri 5/23/14	Thu 6/5/14	Pearson
256	**Standard Setting Tasks**	**259 days**	**Mon 7/1/13**	**Thu 6/26/14**	
257	Standard Setting Presentation to TAC 1	2 days	Tue 12/3/13	Wed 12/4/13	Pearson
258	Standard Setting Procedure Decision review rounds	45 days	Mon 3/3/14	Fri 5/2/14	Pearson
259	Standard Setting Procedure Decision - Final	0 days	Fri 5/2/14	Fri 5/2/14	Pearson
260	Standard Setting Material review rounds	15 days	Mon 5/5/14	Fri 5/23/14	Pearson
261	Standard Setting Material CDE Review Final	5 days	Mon 5/26/14	Fri 5/30/14	CDE
262	Recruit Standard Setting Participants	19 days	Mon 5/12/14	Thu 6/5/14	Pearson
263	Standard Setting	3 days	Tue 6/24/14	Thu 6/26/14	Pearson
264	Standard Setting Results	1 day	Mon 7/1/13	Mon 7/1/13	
265	CDE approval of Standard Setting Results -- approval to proceed with reporting	5 days	Tue 7/2/13	Mon 7/8/13	CDE
266	**Equating**	**113 days**	**Mon 7/1/13**	**Wed 12/4/13**	
267	Linking and Equating Presentation to TAC 1	2 days	Tue 12/3/13	Wed 12/4/13	Pearson
268	Alignment Studies	20 days	Mon 7/1/13	Fri 7/26/13	Pearson
269	**TAC Meetings**	**112 days**	**Tue 9/3/13**	**Wed 2/5/14**	
270	TAC Meeting 1	2 days	Tue 9/3/13	Wed 9/4/13	Pearson
271	TAC Meeting 2	2 days	Tue 12/3/13	Wed 12/4/13	Pearson
272	TAC Meeting 3	2 days	Tue 2/4/14	Wed 2/5/14	Pearson
273	**Technical Reports**	**60 days**	**Fri 5/23/14**	**Fri 8/15/14**	
274	Technical Report – Final version to CDE	0 days	Fri 8/15/14	Fri 8/15/14	Pearson
275	Irregularity and Data Forensic Report	10 days	Fri 5/23/14	Thu 6/5/14	Pearson
276	Training and Support--development and delivery	180 days	Mon 7/1/13	Fri 3/7/14	
277	**Customer Service**	**260 days**	**Mon 7/1/13**	**Mon 6/30/14**	
278	Customer feedback survey	0 days	Mon 6/30/14	Mon 6/30/14	Pearson
279	Establish DAC Website - Updates	20 days	Mon 7/1/13	Fri 7/26/13	Pearson

ID	Task Name	Duration	Start	Finish	Resource Names
0	**CO Alternate Assessment - FY2015**	**587 days**	**Mon 6/2/14**	**Wed 8/31/16**	
1	**START**	**587 days**	**Mon 6/2/14**	**Wed 8/31/16**	
2	**General**	**5 days**	**Tue 7/1/14**	**Mon 7/7/14**	
3	Security Plan updated and rebaselined	5 days	Tue 7/1/14	Mon 7/7/14	Pearson
4	**Program Management**	**304 days**	**Tue 7/1/14**	**Mon 8/31/15**	
5	**Project Schedule**	**9 days**	**Tue 7/1/14**	**Fri 7/11/14**	
6	Draft Project Schedule Created	4 days	Tue 7/1/14	Fri 7/4/14	Pearson
7	Project Schedule - CDE Review	3 days	Mon 7/7/14	Wed 7/9/14	CDE
8	Project Schedule - CDE and Pearson Joint Review	1 day	Thu 7/10/14	Thu 7/10/14	Pearson/CDE
9	Project Schedule Updated and Baselined	1 day	Fri 7/11/14	Fri 7/11/14	Pearson
10	**Project Meetings**	**232 days**	**Tue 7/1/14**	**Wed 5/20/15**	
11	**Project Meeting 1**	**12 days**	**Tue 7/1/14**	**Wed 7/16/14**	
12	Agenda Drafted and Delivered to CDE	2 days	Tue 7/1/14	Wed 7/2/14	Pearson
13	Meeting held (Denver, CO)	2 days	Tue 7/8/14	Wed 7/9/14	
14	Meeting Minutes Distributed	5 days	Thu 7/10/14	Wed 7/16/14	Pearson
15	**Project Meeting 2**	**13 days**	**Mon 9/1/14**	**Wed 9/17/14**	
16	Agenda Drafted and Delivered to CDE	2 days	Mon 9/1/14	Tue 9/2/14	Pearson
17	Meeting held (Denver, CO)	2 days	Tue 9/9/14	Wed 9/10/14	
18	Meeting Minutes Distributed	5 days	Thu 9/11/14	Wed 9/17/14	Pearson
19	**Project Meeting 3 - In person**	**13 days**	**Mon 11/3/14**	**Wed 11/19/14**	
20	Agenda Drafted and Delivered to CDE	2 days	Mon 11/3/14	Tue 11/4/14	Pearson
21	Meeting held (San Antonio, TX)	2 days	Tue 11/11/14	Wed 11/12/14	
22	Meeting Minutes Distributed	5 days	Thu 11/13/14	Wed 11/19/14	Pearson
23	**Project Meeting 4**	**14 days**	**Fri 1/2/15**	**Wed 1/21/15**	
24	Agenda Drafted and Delivered to CDE	2 days	Fri 1/2/15	Mon 1/5/15	Pearson
25	Meeting held (Denver, CO)	2 days	Tue 1/13/15	Wed 1/14/15	
26	Meeting Minutes Distributed	5 days	Thu 1/15/15	Wed 1/21/15	Pearson
27	**Project Meeting 5**	**13 days**	**Mon 3/2/15**	**Wed 3/18/15**	
28	Agenda Drafted and Delivered to CDE	2 days	Mon 3/2/15	Tue 3/3/15	Pearson
29	Meeting held (Denver, CO)	2 days	Tue 3/10/15	Wed 3/11/15	
30	Meeting Minutes Distributed	5 days	Thu 3/12/15	Wed 3/18/15	Pearson
31	**Project Meeting 6 - In person**	**14 days**	**Fri 5/1/15**	**Wed 5/20/15**	
32	Agenda Drafted and Delivered to CDE	2 days	Fri 5/1/15	Mon 5/4/15	Pearson
33	Meeting held (San Antonio, TX)	2 days	Tue 5/12/15	Wed 5/13/15	
34	Meeting Minutes Distributed	5 days	Thu 5/14/15	Wed 5/20/15	Pearson
35	**Monthy Reports**	**239 days**	**Tue 8/5/14**	**Mon 7/6/15**	
36	Jul	0 days	Tue 8/5/14	Tue 8/5/14	Pearson
37	Aug	0 days	Wed 9/3/14	Wed 9/3/14	Pearson
38	Sep	0 days	Fri 10/3/14	Fri 10/3/14	Pearson
39	Oct	0 days	Wed 11/5/14	Wed 11/5/14	Pearson
40	Nov	0 days	Wed 12/3/14	Wed 12/3/14	Pearson
41	Dec	0 days	Tue 1/6/15	Tue 1/6/15	Pearson
42	Jan	0 days	Wed 2/4/15	Wed 2/4/15	Pearson
43	Feb	0 days	Wed 3/4/15	Wed 3/4/15	Pearson
44	Mar	0 days	Fri 4/3/15	Fri 4/3/15	Pearson
45	Apr	0 days	Tue 5/5/15	Tue 5/5/15	Pearson
46	May	0 days	Wed 6/3/15	Wed 6/3/15	Pearson

ID	Task Name	Duration	Start	Finish	Resource Names
47	Jun	0 days	Mon 7/6/15	Mon 7/6/15	Pearson
48	**DAC**	**108 days**	**Tue 10/21/14**	**Thu 3/19/15**	
49	DAC Academy	2 days	Wed 2/18/15	Thu 2/19/15	Pearson
50	DAC Management 1	2 days	Tue 10/21/14	Wed 10/22/14	Pearson
51	DAC Management 2	2 days	Wed 3/18/15	Thu 3/19/15	Pearson
52	**Program Improvement**	**265 days**	**Tue 7/1/14**	**Mon 7/6/15**	
53	Program Improvement Plan - Development	15 days	Wed 12/17/14	Tue 1/6/15	Pearson
54	Program Improvement Plan - Production	15 days	Wed 1/14/15	Tue 2/3/15	Pearson
55	Program Improvement Plan - Shipping and Receipt	15 days	Mon 2/2/15	Fri 2/20/15	Pearson
56	Program Improvement Plan - Administration	15 days	Mon 3/30/15	Fri 4/17/15	Pearson
57	Program Improvement Plan - Scanning	15 days	Tue 7/1/14	Mon 7/21/14	Pearson
58	Program Improvement Plan - Scoring	15 days	Wed 1/28/15	Tue 2/17/15	Pearson
59	Program Improvement Plan - Data Processing	15 days	Tue 8/26/14	Mon 9/15/14	Pearson
60	Program Improvement Plan - Reporting and Psychometrics	15 days	Tue 6/16/15	Mon 7/6/15	Pearson
61	Program Improvement Plan - Meetings	15 days	Fri 9/12/14	Thu 10/2/14	Pearson
62	**Invoices**	**239 days**	**Tue 9/30/14**	**Mon 8/31/15**	
63	Invoice Q1	0 days	Tue 9/30/14	Tue 9/30/14	Pearson
64	Invoice Q2	0 days	Wed 12/31/14	Wed 12/31/14	Pearson
65	Invoice Q3	0 days	Tue 3/31/15	Tue 3/31/15	Pearson
66	Invoice Q4	0 days	Mon 6/15/15	Mon 6/15/15	Pearson
67	Invoice - "tail"	0 days	Mon 8/31/15	Mon 8/31/15	Pearson
68	**Assessment Development**	**309 days**	**Mon 6/2/14**	**Thu 8/6/15**	
69	**Style Guide**	**30 days**	**Tue 7/1/14**	**Mon 8/11/14**	
70	Colorado Style Guide - Draft	30 days	Tue 7/1/14	Mon 8/11/14	Pearson
71	Colorado Style Guide - Final for year	0 days	Tue 7/1/14	Tue 7/1/14	Pearson
72	**Item Development (Spring 2016 Field Test)**	**288 days**	**Tue 7/1/14**	**Thu 8/6/15**	
73	Item Writer Recruiting	25 days	Mon 2/2/15	Fri 3/6/15	Pearson
74	Develop Training Materials and Item Development Plans	5 days	Wed 2/25/15	Tue 3/3/15	Pearson
75	Item Development Meeting 1 Materials – CDE Review	5 days	Wed 3/4/15	Tue 3/10/15	CDE
76	Edit and ship materials after CDE review	9 days	Wed 3/11/15	Mon 3/23/15	Pearson
77	Item Development Meeting 1	2 days	Tue 3/24/15	Wed 3/25/15	Pearson
78	Provide developers feedback	39 days	Fri 3/27/15	Wed 5/20/15	Pearson
79	Develop training materials and item development plans (meeting 2)	5 days	Tue 7/1/14	Mon 7/7/14	Pearson
80	Item Writer Recruiting	25 days	Fri 5/1/15	Thu 6/4/15	Pearson
81	Item Development Meeting 2 Materials – CDE Review	3 days	Thu 5/28/15	Mon 6/1/15	CDE
82	Edit and ship materials after CDE review	10 days	Tue 6/2/15	Mon 6/15/15	Pearson
83	Item Development Meeting 2	2 days	Tue 6/16/15	Wed 6/17/15	Pearson
84	Provide developers feedback	10 days	Fri 6/19/15	Thu 7/2/15	Pearson
85	Conduct internal Content and Editorial Reviews	20 days	Fri 7/3/15	Thu 7/30/15	Pearson
86	Item Review – CDE Review	5 days	Fri 7/31/15	Thu 8/6/15	CDE
87	**Content Review - SS and SC and PLD Meeting (Spring 2015 Field Test)**	**61 days**	**Thu 6/19/14**	**Thu 9/11/14**	
88	Item Review – CDE Review (newly written items)	5 days	Tue 7/1/14	Mon 7/7/14	CDE
89	Recruit Content Review Participants	10 days	Tue 7/1/14	Mon 7/14/14	Pearson
90	Create training materials for Content and PLD Meetings	10 days	Thu 6/19/14	Wed 7/2/14	Pearson
91	Content and PLD Meeting training Materials – CDE Review	5 days	Thu 7/3/14	Wed 7/9/14	CDE
92	Edit and ship materials after CDE review	13 days	Thu 7/10/14	Mon 7/28/14	Pearson
93	Content and PLD Meeting	2 days	Tue 7/29/14	Wed 7/30/14	Pearson

ID	Task Name	Duration	Start	Finish	Resource Names
94	Implement edits suggested by committee	30 days	Fri 8/1/14	Thu 9/11/14	Pearson
95	**Bias and Sensitivity Review**	**62 days**	**Thu 6/19/14**	**Fri 9/12/14**	
96	Recruit Content Review Participants	10 days	Tue 7/1/14	Mon 7/14/14	Pearson
97	Create training materials for Bias and sensitivity Reviews	10 days	Thu 6/19/14	Wed 7/2/14	Pearson
98	Bias and Sensitivity Review training materials – CDE Review	5 days	Thu 7/3/14	Wed 7/9/14	CDE
99	Edit and ship materials after CDE review	13 days	Thu 7/10/14	Mon 7/28/14	Pearson
100	Bias and Sensitivity Review Meeting	1 day	Thu 7/31/14	Thu 7/31/14	Pearson
101	Implements edits suggested by committee	30 days	Mon 8/4/14	Fri 9/12/14	Pearson
102	Send final results of Content and Bias Sensitivity Review meeting	1 day	Thu 8/7/14	Thu 8/7/14	Pearson
103	**Data Review**	**38 days**	**Mon 6/2/14**	**Wed 7/23/14**	
104	Recruit Data Review Participants	25 days	Mon 6/2/14	Fri 7/4/14	Pearson
105	Print Data Review Training Materials	5 days	Wed 6/11/14	Tue 6/17/14	Pearson
106	Produce Data Review Training Materials – CDE Review	4 days	Wed 6/18/14	Mon 6/23/14	CDE
107	Edit and ship materials after CDE review	10 days	Tue 6/24/14	Mon 7/7/14	Pearson
108	Conduct Data Review meeting	1 day	Tue 7/8/14	Tue 7/8/14	Pearson
109	Implement edits suggested by committee	10 days	Wed 7/9/14	Tue 7/22/14	Pearson
110	Provide final results of Data Review Meetings	1 day	Wed 7/23/14	Wed 7/23/14	Pearson
111	**Form Development (Spring 2015 Operational, Breach Forms, and Stand Alone Field Test)**	**131 days**	**Tue 7/1/14**	**Tue 12/30/14**	
112	Field Testing Plan	20 days	Tue 7/1/14	Mon 7/28/14	Pearson
113	**Core Test Form Development (Science and Social Studies)**	**49 days**	**Thu 7/24/14**	**Tue 9/30/14**	
114	Construct forms	34 days	Thu 7/24/14	Tue 9/9/14	Pearson
115	CDE reviews forms	5 days	Wed 9/10/14	Tue 9/16/14	CDE
116	Revise forms based on CDE review	5 days	Wed 9/17/14	Tue 9/23/14	Pearson
117	Core Test Form Development – CDE Review Final	5 days	Wed 9/24/14	Tue 9/30/14	CDE
118	Core Test Form Development – Final	0 days	Tue 9/30/14	Tue 9/30/14	Pearson
119	**Embedded Field Test Form Development**	**55 days**	**Wed 10/1/14**	**Tue 12/16/14**	
120	Construct forms	40 days	Wed 10/1/14	Tue 11/25/14	Pearson
121	CDE reviews forms	5 days	Wed 11/26/14	Tue 12/2/14	CDE
122	Revise forms based on CDE review	5 days	Wed 12/3/14	Tue 12/9/14	Pearson
123	Embedded Field Test Form Development – Final	5 days	Wed 12/10/14	Tue 12/16/14	CDE
124	Production ready fiiles to print	0 days	Tue 12/16/14	Tue 12/16/14	Pearson
125	**Special Populations**	**65 days**	**Tue 7/1/14**	**Mon 9/29/14**	
126	Accommodations Procedures Manual review rounds	60 days	Tue 7/1/14	Mon 9/22/14	Pearson
127	Accommodations Procedures Manual - CDE Review Final	5 days	Tue 9/23/14	Mon 9/29/14	Pearson
128	**Certification for District Translators**	**65 days**	**Tue 7/1/14**	**Mon 9/29/14**	
129	Procedures document produced	60 days	Tue 7/1/14	Mon 9/22/14	Pearson
130	Procedures for Certification for District Translators – CDE Review Final	5 days	Tue 9/23/14	Mon 9/29/14	CDE
131	**Test/Ancillary Material - Development**	**131 days**	**Tue 7/1/14**	**Tue 12/30/14**	
132	District and School Assessment Coordinator review rounds	60 days	Tue 7/1/14	Mon 9/22/14	Pearson
133	Document Development: District and School Assessment Coordinators Manual – CDE Review Final	5 days	Tue 9/23/14	Mon 9/29/14	CDE
134	Examiners Manual review rounds	30 days	Mon 10/20/14	Fri 11/28/14	Pearson
135	Document Development: Examiners Manual – CDE Review Final	5 days	Mon 12/1/14	Fri 12/5/14	CDE
136	Certification Forms review rounds	60 days	Tue 7/1/14	Mon 9/22/14	Pearson
137	Document Development: Certification Forms – CDE Review Final	5 days	Tue 9/23/14	Mon 9/29/14	CDE
138	Document Development: Test Booklets CDE Review Final	5 days	Wed 12/24/14	Tue 12/30/14	CDE
139	Ancillary Materials (Manipulatives) review rounds	60 days	Tue 7/1/14	Mon 9/22/14	Pearson
140	Document Development: Ancillary Materials – CDE Review Final	5 days	Tue 9/23/14	Mon 9/29/14	CDE

ID	Task Name	Duration	Start	Finish	Resource Names
141	**Assessment Administration**	**566 days**	**Tue 7/1/14**	**Wed 8/31/16**	
142	**Orders for Materials**	**61 days**	**Fri 1/2/15**	**Fri 3/27/15**	
143	Pre-ID File Transfer	0 days	Fri 1/2/15	Fri 1/2/15	CDE
144	Materials Ordering System Operational	0 days	Fri 1/2/15	Fri 1/2/15	Pearson
145	Materials Ordering Window	15 days	Fri 1/2/15	Thu 1/22/15	Pearson
146	Online Rosters Generated	5 days	Fri 1/23/15	Thu 1/29/15	Pearson
147	Additional Materials Ordering Window	20 days	Mon 3/2/15	Fri 3/27/15	Pearson
148	**Test/Ancillary Material - Production**	**76 days**	**Tue 9/30/14**	**Tue 1/13/15**	
149	Examiners Manual Produced	15 days	Mon 12/8/14	Fri 12/26/14	Pearson
150	Test Booklets Produced	20 days	Wed 12/17/14	Tue 1/13/15	Pearson
151	Ancillaries Produced	15 days	Tue 9/30/14	Mon 10/20/14	Pearson
152	Certification Forms Produced	5 days	Tue 9/30/14	Mon 10/6/14	Pearson
153	**Packaging and Delivery**	**21 days**	**Fri 1/2/15**	**Fri 1/30/15**	
154	Colorado Districts in Shipping System	0 days	Fri 1/2/15	Fri 1/2/15	Pearson
155	Packaging Specifications Finalized	0 days	Fri 1/2/15	Fri 1/2/15	Pearson
156	Non-secure Materials Packaged	10 days	Wed 1/14/15	Tue 1/27/15	Pearson
157	Non-secure Materials Shipped	3 days	Wed 1/28/15	Fri 1/30/15	Pearson
158	Non-secure Materials in District	0 days	Fri 1/30/15	Fri 1/30/15	Pearson
159	Secure Materials Packaged	10 days	Wed 1/14/15	Tue 1/27/15	Pearson
160	Secure Materials Shipped	3 days	Wed 1/28/15	Fri 1/30/15	Pearson
161	Secure Materials in District	0 days	Fri 1/30/15	Fri 1/30/15	Pearson
162	**Test Administration**	**20 days**	**Mon 3/2/15**	**Fri 3/27/15**	
163	Operational Test Administration Window - Science and Social Studies	20 days	Mon 3/2/15	Fri 3/27/15	
164	Online Score Submission Window	20 days	Mon 3/2/15	Fri 3/27/15	
165	**Material Return and Verification**	**370 days**	**Tue 3/31/15**	**Wed 8/31/16**	
166	To Be Scored Materials Return Shipment	0 days	Tue 3/31/15	Tue 3/31/15	Pearson
167	Not To Be Scored Materials Return Shipment	0 days	Tue 3/31/15	Tue 3/31/15	Pearson
168	Non-scored Materials Destruction	0 days	Wed 3/2/16	Wed 3/2/16	Pearson
169	Scored Materials Destruction	0 days	Wed 8/31/16	Wed 8/31/16	Pearson
170	Secure Materials Verification – Initial Report	0 days	Tue 4/14/15	Tue 4/14/15	Pearson
171	Secure Materials Verification – Weekly Report	0 days	Tue 4/21/15	Tue 4/21/15	Pearson
172	Secure Materials Verification – Final Report	0 days	Tue 4/28/15	Tue 4/28/15	Pearson
173	**Test Monitoring**	**194 days**	**Tue 7/1/14**	**Fri 3/27/15**	
174	Test Monitoring Protocol review rounds	60 days	Tue 7/1/14	Mon 9/22/14	Pearson
175	Test Monitoring Protocol – CDE Review Final	5 days	Tue 9/23/14	Mon 9/29/14	CDE
176	Test Monitoring Sites Selected	0 days	Thu 1/15/15	Thu 1/15/15	Pearson
177	Test Monitoring Sites Notified – TBD if needed	0 days	Fri 2/13/15	Fri 2/13/15	Pearson
178	Test Monitoring	20 days	Mon 3/2/15	Fri 3/27/15	Pearson
179	**Scoring**	**261 days**	**Tue 7/1/14**	**Tue 6/30/15**	
180	Scoring Procedures review rounds	40 days	Tue 7/1/14	Mon 8/25/14	Pearson
181	Scoring Procedures - CDE Review Final	5 days	Tue 8/26/14	Mon 9/1/14	CDE
182	Scoring Materials review rounds	50 days	Tue 9/2/14	Mon 11/10/14	Pearson
183	Scoring Materials - CDE Review Final	5 days	Tue 11/11/14	Mon 11/17/14	CDE
184	Scoring Monitors Recruitment	25 days	Fri 1/2/15	Thu 2/5/15	Pearson
185	Scoring Monitors Training	3 days	Fri 2/6/15	Tue 2/10/15	Pearson
186	**Online Score Submission System**	**152 days**	**Tue 7/1/14**	**Wed 1/28/15**	
187	Baseline System Requirements	80 days	Tue 7/1/14	Mon 10/20/14	Pearson

EXHIBIT B — Colorado Alternate Schedule - FY2015

ID	Task Name	Duration	Start	Finish	Resource Names
188	System developed, tested, reviewed with CDE	65 days	Tue 10/21/14	Mon 1/19/15	Pearson
189	Online Score Submission System - CDE Final Review	5 days	Tue 1/20/15	Mon 1/26/15	CDE
190	Create and Generate Teacher User ID's and Passwords	1 day	Tue 1/27/15	Tue 1/27/15	Pearson
191	Online Score Submission System - GO LIVE	0 days	Wed 1/28/15	Wed 1/28/15	Pearson
192	Scoring Guidance Document review rounds	60 days	Wed 4/1/15	Tue 6/23/15	Pearson
193	Scoring Guidance Document - CDE review	5 days	Wed 6/24/15	Tue 6/30/15	CDE
194	Scoring Guidance - Available to Classroom Teachers	0 days	Tue 6/30/15	Tue 6/30/15	Pearson
195	**Reporting of Data Files and Assessment Results**	**250 days**	**Tue 7/1/14**	**Mon 6/15/15**	
196	**Reporting Files - Specs**	**65 days**	**Tue 7/1/14**	**Mon 9/29/14**	
197	Reporting: Data File Layout review rounds	45 days	Tue 7/1/14	Mon 9/1/14	Pearson
198	Reporting: Score Report Shells review rounds	60 days	Tue 7/1/14	Mon 9/22/14	Pearson
199	Reporting: Individual Student Level File Layout - CDE Review Final	5 days	Tue 9/2/14	Mon 9/8/14	CDE
200	Reporting: Individual Student Level Report Shells – CDE Review Final	5 days	Tue 9/23/14	Mon 9/29/14	CDE
201	Reporting: State Level File Layouts – CDE Review Final	5 days	Tue 9/2/14	Mon 9/8/14	CDE
202	Reporting: District Level File Layouts – CDE Review Final	5 days	Tue 9/2/14	Mon 9/8/14	CDE
203	Reporting: District Level Report Shells – CDE Review Final	5 days	Tue 9/23/14	Mon 9/29/14	CDE
204	Reporting: School Level File Layouts – CDE Review Final	5 days	Tue 9/2/14	Mon 9/8/14	CDE
205	Reporting: School Level Report Shells – CDE Review Final	5 days	Tue 9/23/14	Mon 9/29/14	CDE
206	**Reports**	**250 days**	**Tue 7/1/14**	**Mon 6/15/15**	
207	Student Biographical Data Review Window	10 days	Mon 3/30/15	Fri 4/10/15	CO DISTRICTS
208	**Operational Reporting**	**16 days**	**Mon 5/25/15**	**Mon 6/15/15**	
209	Reporting: QC of Individual Student Level File – CDE Review	1 day	Mon 5/25/15	Mon 5/25/15	CDE
210	Reporting: QC of Individual Student Level File – CDE Verification	0 days	Mon 5/25/15	Mon 5/25/15	CDE
211	Reporting: Individual Student Level File Posted	0 days	Mon 5/25/15	Mon 5/25/15	Pearson
212	Reporting: Individual Student Report Bellwethers	2 days	Fri 5/29/15	Mon 6/1/15	CDE
213	Reporting: Individual Student Level File Electronic Reports Posted	0 days	Thu 6/4/15	Thu 6/4/15	Pearson
214	Reporting: Individual Student Level Hard Copy Reports in District	0 days	Mon 6/15/15	Mon 6/15/15	Pearson
215	**Operational Reporting - Writing (Post Standard Setting)**	**16 days**	**Tue 7/1/14**	**Tue 7/22/14**	
216	Reporting: QC of Individual Student Level File – CDE Review	1 day	Tue 7/1/14	Tue 7/1/14	CDE
217	Reporting: QC of Individual Student Level File – CDE Verification	0 days	Tue 7/1/14	Tue 7/1/14	CDE
218	Reporting: Individual Student Level File Posted	0 days	Tue 7/1/14	Tue 7/1/14	Pearson
219	Reporting: Individual Student Report Bellwethers	2 days	Mon 7/7/14	Tue 7/8/14	CDE
220	Reporting: Individual Student Level File Electronic Reports Posted	0 days	Fri 7/11/14	Fri 7/11/14	Pearson
221	Reporting: Individual Student Level Hard Copy Reports in District	0 days	Tue 7/22/14	Tue 7/22/14	Pearson
222	**State Level Files**	**234 days**	**Tue 7/1/14**	**Fri 5/22/15**	
223	Pearson updates scoring system and produces/verifies State Level File	9 days	Tue 5/12/15	Fri 5/22/15	Pearson
224	Reporting: QC of State Level File(s) – CDE Review	2 days	Tue 7/1/14	Wed 7/2/14	CDE
225	Reporting: QC of State Level File(s) – CDE Verification	0 days	Wed 7/2/14	Wed 7/2/14	CDE
226	Reporting: State Level File(s) Posted	0 days	Wed 7/2/14	Wed 7/2/14	Pearson
227	**District Level Files**	**10 days**	**Tue 7/1/14**	**Mon 7/14/14**	
228	Reporting: QC of District Level File(s) – CDE Review	2 days	Tue 7/1/14	Wed 7/2/14	CDE
229	Reporting: QC of District Level File(s) – CDE Verification	0 days	Wed 7/2/14	Wed 7/2/14	CDE
230	Reporting: District Level File(s) Posted	0 days	Wed 7/2/14	Wed 7/2/14	Pearson
231	Reporting: District Reports Bellwethers	2 days	Tue 7/8/14	Wed 7/9/14	CDE
232	Reporting: District Electronic Reports Posted	0 days	Mon 7/14/14	Mon 7/14/14	Pearson
233	**School Level Files**	**10 days**	**Tue 7/1/14**	**Mon 7/14/14**	
234	Reporting: QC of School Level File(s) – CDE Review	2 days	Tue 7/1/14	Wed 7/2/14	CDE

ID	Task Name	Duration	Start	Finish	Resource Names
235	Reporting: QC of School Level File(s) – CDE Verification	0 days	Wed 7/2/14	Wed 7/2/14	CDE
236	Reporting: School Level File(s) Posted	0 days	Wed 7/2/14	Wed 7/2/14	Pearson
237	Reporting: School Reports Bellwethers	2 days	Tue 7/8/14	Wed 7/9/14	CDE
238	Reporting: School Electronic Reports Posted	0 days	Mon 7/14/14	Mon 7/14/14	Pearson
239	**Interpretive Guide**	**60 days**	**Tue 7/1/14**	**Mon 9/22/14**	
240	Interpretive Guide review rounds	60 days	Tue 7/1/14	Mon 9/22/14	Pearson
241	Assessment Interpretive Guide – Review Final	5 days	Tue 7/1/14	Mon 7/7/14	CDE
242	Assessment Interpretive Guide Posted	0 days	Tue 7/1/14	Tue 7/1/14	Pearson
243	**Psychometric, Research, and Technical Activities**	**293 days**	**Tue 7/1/14**	**Fri 8/14/15**	
244	**Field Test and Operational Analysis**	**240 days**	**Tue 7/1/14**	**Mon 6/1/15**	
245	Field Test- Sampling Design	60 days	Tue 7/1/14	Mon 9/22/14	Pearson
246	Psychometric Analysis of Field Test	30 days	Tue 4/21/15	Mon 6/1/15	Pearson
247	Operational Analysis	11 days	Fri 4/24/15	Fri 5/8/15	Pearson
248	CDE Review and Approval of Equating Results	1 day	Mon 5/11/15	Mon 5/11/15	CDE
249	**Equating**	**112 days**	**Tue 7/1/14**	**Wed 12/3/14**	
250	Linking and Equating Presentation to TAC 2	2 days	Tue 12/2/14	Wed 12/3/14	Pearson
251	Alignment Studies	20 days	Tue 7/1/14	Mon 7/28/14	Pearson
252	Vertical Scale Presentation to TAC 1	2 days	Tue 9/2/14	Wed 9/3/14	Pearson
253	**TAC Meetings**	**112 days**	**Tue 9/2/14**	**Wed 2/4/15**	
254	TAC Meeting 1	2 days	Tue 9/2/14	Wed 9/3/14	Pearson
255	TAC Meeting 2	2 days	Tue 12/2/14	Wed 12/3/14	Pearson
256	TAC Meeting 3	2 days	Tue 2/3/15	Wed 2/4/15	Pearson
257	**Technical Reports**	**132 days**	**Wed 2/11/15**	**Fri 8/14/15**	
258	Technical Report – Final version to CDE	0 days	Fri 8/14/15	Fri 8/14/15	Pearson
259	Irregularity and Data Forensic Report	10 days	Wed 2/11/15	Tue 2/24/15	Pearson
260	**Training and Support**	**179 days**	**Tue 7/1/14**	**Fri 3/6/15**	
261	Understanding Assessment Results Training Materials review rounds	20 days	Tue 7/1/14	Mon 7/28/14	Pearson
262	Understanding Assessment Results Training Material - CDE Final Review	5 days	Tue 7/29/14	Mon 8/4/14	CDE
263	Understanding Assessment Results Training	5 days	Mon 8/25/14	Fri 8/29/14	Pearson
264	Alternate Assessment Administration Training Material review rounds	30 days	Fri 1/2/15	Thu 2/12/15	Pearson
265	Alternate Assessment Administration Training Material CDE Review Final	5 days	Fri 2/13/15	Thu 2/19/15	CDE
266	Conduct Alternate Assessment Administration Training	5 days	Mon 3/2/15	Fri 3/6/15	Pearson
267	Online Training Support Materials	0 days	Mon 2/2/15	Mon 2/2/15	Pearson
268	**Customer Service**	**260 days**	**Tue 7/1/14**	**Tue 6/30/15**	
269	Customer feedback survey	0 days	Tue 6/30/15	Tue 6/30/15	Pearson
270	Establish DAC Website	20 days	Tue 7/1/14	Mon 7/28/14	Pearson

ID	Task Name	Duration	Start	Finish	Resource Names
0	**CO Alternate Assessment - FY2016**	**588 days**	**Mon 6/1/15**	**Thu 8/31/17**	
1	**START**	**588 days**	**Mon 6/1/15**	**Thu 8/31/17**	
2	**General**	**5 days**	**Wed 7/1/15**	**Tue 7/7/15**	
3	Security Plan updated and rebaselined	5 days	Wed 7/1/15	Tue 7/7/15	Pearson
4	**Program Management**	**305 days**	**Wed 7/1/15**	**Wed 8/31/16**	
5	**Project Schedule**	**9 days**	**Wed 7/1/15**	**Mon 7/13/15**	
6	Draft Project Schedule Created	4 days	Wed 7/1/15	Mon 7/6/15	Pearson
7	Project Schedule - CDE Review	3 days	Tue 7/7/15	Thu 7/9/15	CDE
8	Project Schedule - CDE and Pearson Joint Review	1 day	Fri 7/10/15	Fri 7/10/15	Pearson/CDE
9	Project Schedule Updated and Baselined	1 day	Mon 7/13/15	Mon 7/13/15	Pearson
10	**Project Meetings**	**231 days**	**Wed 7/1/15**	**Wed 5/18/16**	
11	**Project Meeting 1**	**16 days**	**Wed 7/1/15**	**Wed 7/22/15**	
12	Agenda Drafted and Delivered to CDE	2 days	Wed 7/1/15	Thu 7/2/15	Pearson
13	Meeting held (Denver, CO)	2 days	Tue 7/14/15	Wed 7/15/15	
14	Meeting Minutes Distributed	5 days	Thu 7/16/15	Wed 7/22/15	Pearson
15	**Project Meeting 2**	**12 days**	**Tue 9/1/15**	**Wed 9/16/15**	
16	Agenda Drafted and Delivered to CDE	2 days	Tue 9/1/15	Wed 9/2/15	Pearson
17	Meeting held (Denver, CO)	2 days	Tue 9/8/15	Wed 9/9/15	
18	Meeting Minutes Distributed	5 days	Thu 9/10/15	Wed 9/16/15	Pearson
19	**Project Meeting 3 - In person**	**13 days**	**Mon 11/2/15**	**Wed 11/18/15**	
20	Agenda Drafted and Delivered to CDE	2 days	Mon 11/2/15	Tue 11/3/15	Pearson
21	Meeting held (San Antonio, TX)	2 days	Tue 11/10/15	Wed 11/11/15	
22	Meeting Minutes Distributed	5 days	Thu 11/12/15	Wed 11/18/15	Pearson
23	**Project Meeting 4**	**13 days**	**Mon 1/4/16**	**Wed 1/20/16**	
24	Agenda Drafted and Delivered to CDE	2 days	Mon 1/4/16	Tue 1/5/16	Pearson
25	Meeting held (Denver, CO)	2 days	Tue 1/12/16	Wed 1/13/16	
26	Meeting Minutes Distributed	5 days	Thu 1/14/16	Wed 1/20/16	Pearson
27	**Project Meeting 5**	**12 days**	**Tue 3/1/16**	**Wed 3/16/16**	
28	Agenda Drafted and Delivered to CDE	2 days	Tue 3/1/16	Wed 3/2/16	Pearson
29	Meeting held (Denver, CO)	2 days	Tue 3/8/16	Wed 3/9/16	
30	Meeting Minutes Distributed	5 days	Thu 3/10/16	Wed 3/16/16	Pearson
31	**Project Meeting 6 - In person**	**13 days**	**Mon 5/2/16**	**Wed 5/18/16**	
32	Agenda Drafted and Delivered to CDE	2 days	Mon 5/2/16	Tue 5/3/16	Pearson
33	Meeting held (San Antonio, TX)	2 days	Tue 5/10/16	Wed 5/11/16	
34	Meeting Minutes Distributed	5 days	Thu 5/12/16	Wed 5/18/16	Pearson
35	**Monthy Reports**	**240 days**	**Wed 8/5/15**	**Wed 7/6/16**	
36	Jul	0 days	Wed 8/5/15	Wed 8/5/15	Pearson
37	Aug	0 days	Thu 9/3/15	Thu 9/3/15	Pearson
38	Sep	0 days	Mon 10/5/15	Mon 10/5/15	Pearson
39	Oct	0 days	Thu 11/5/15	Thu 11/5/15	Pearson
40	Nov	0 days	Thu 12/3/15	Thu 12/3/15	Pearson
41	Dec	0 days	Wed 1/6/16	Wed 1/6/16	Pearson
42	Jan	0 days	Thu 2/4/16	Thu 2/4/16	Pearson
43	Feb	0 days	Fri 3/4/16	Fri 3/4/16	Pearson
44	Mar	0 days	Mon 4/4/16	Mon 4/4/16	Pearson
45	Apr	0 days	Thu 5/5/16	Thu 5/5/16	Pearson
46	May	0 days	Fri 6/3/16	Fri 6/3/16	Pearson

ID	Task Name	Duration	Start	Finish	Resource Names
47	Jun	0 days	Wed 7/6/16	Wed 7/6/16	Pearson
48	**DAC**	**107 days**	**Wed 10/21/15**	**Thu 3/17/16**	
49	DAC Academy	2 days	Thu 2/18/16	Fri 2/19/16	Pearson
50	DAC Management 1	2 days	Wed 10/21/15	Thu 10/22/15	Pearson
51	DAC Management 2	2 days	Wed 3/16/16	Thu 3/17/16	Pearson
52	**Program Improvement**	**209 days**	**Mon 10/5/15**	**Thu 7/21/16**	
53	Program Improvement Plan - Development	15 days	Thu 12/24/15	Wed 1/13/16	Pearson
54	Program Improvement Plan - Production	15 days	Thu 1/14/16	Wed 2/3/16	Pearson
55	Program Improvement Plan - Shipping and Receipt	15 days	Tue 2/2/16	Mon 2/22/16	Pearson
56	Program Improvement Plan - Administration	15 days	Mon 3/28/16	Fri 4/15/16	Pearson
57	Program Improvement Plan - Scanning	15 days	Wed 11/11/15	Tue 12/1/15	Pearson
58	Program Improvement Plan - Scoring	15 days	Wed 1/27/16	Tue 2/16/16	Pearson
59	Program Improvement Plan - Data Processing	15 days	Fri 7/1/16	Thu 7/21/16	Pearson
60	Program Improvement Plan - Reporting and Psychometrics	15 days	Mon 6/13/16	Fri 7/1/16	Pearson
61	Program Improvement Plan - Meetings	15 days	Mon 10/5/15	Fri 10/23/15	Pearson
62	**Invoices**	**240 days**	**Wed 9/30/15**	**Wed 8/31/16**	
63	Invoice Q1	0 days	Wed 9/30/15	Wed 9/30/15	Pearson
64	Invoice Q2	0 days	Thu 12/31/15	Thu 12/31/15	Pearson
65	Invoice Q3	0 days	Thu 3/31/16	Thu 3/31/16	Pearson
66	Invoice Q4	0 days	Wed 6/15/16	Wed 6/15/16	Pearson
67	Invoice - "tail"	0 days	Wed 8/31/16	Wed 8/31/16	Pearson
68	**Assessment Development**	**303 days**	**Mon 6/1/15**	**Wed 7/27/16**	
69	**Style Guide**	**30 days**	**Wed 7/1/15**	**Tue 8/11/15**	
70	Colorado Style Guide - Updates	30 days	Wed 7/1/15	Tue 8/11/15	Pearson
71	Colorado Style Guide - Final for year	0 days	Tue 8/11/15	Tue 8/11/15	Pearson
72	**Item Development (Spring 2017 Field Test)**	**127 days**	**Tue 2/2/16**	**Wed 7/27/16**	
73	Item Writer Recruiting	25 days	Tue 2/2/16	Mon 3/7/16	Pearson
74	Develop Training Materials and Item Development Plans	5 days	Thu 2/25/16	Wed 3/2/16	Pearson
75	Item Development Meeting 1 Materials – CDE Review	5 days	Fri 3/4/16	Thu 3/10/16	CDE
76	Edit and ship materials after CDE review	7 days	Fri 3/11/16	Mon 3/21/16	Pearson
77	Item Development Meeting 1	2 days	Tue 3/22/16	Wed 3/23/16	Pearson
78	Provide developers feedback	39 days	Mon 3/28/16	Thu 5/19/16	Pearson
79	Develop training materials and item development plans (meeting 2)	5 days	Mon 5/16/16	Fri 5/20/16	Pearson
80	Item Writer Recruiting	25 days	Mon 5/2/16	Fri 6/3/16	Pearson
81	Item Development Meeting 2 Materials – CDE Review	3 days	Mon 5/30/16	Wed 6/1/16	CDE
82	Edit and ship materials after CDE review	8 days	Thu 6/2/16	Mon 6/13/16	Pearson
83	Item Development Meeting 2	2 days	Tue 6/14/16	Wed 6/15/16	Pearson
84	Provide developers feedback	10 days	Thu 6/16/16	Wed 6/29/16	Pearson
85	Conduct internal Content and Editorial Reviews	20 days	Thu 6/30/16	Wed 7/27/16	Pearson
86	**Content Review Sc and SS PLD Meeting - SS (Spring 2016 Field Test)**	**68 days**	**Wed 7/1/15**	**Fri 10/2/15**	
87	Item Review – CDE Review (newly written items)	5 days	Mon 7/27/15	Fri 7/31/15	CDE
88	Recruit Content Review Participants	10 days	Wed 7/1/15	Tue 7/14/15	CDE
89	Create training materials for Content and PLD Meetings	9 days	Fri 7/10/15	Wed 7/22/15	Pearson
90	Content and PLD Meeting training Materials – CDE Review	5 days	Thu 7/23/15	Wed 7/29/15	Pearson
91	Edit and ship materials after CDE review	13 days	Thu 7/30/15	Mon 8/17/15	CDE
92	Content and PLD Meeting	2 days	Tue 8/18/15	Wed 8/19/15	Pearson
93	Iimplement edits suggested by committee	30 days	Fri 8/21/15	Thu 10/1/15	Pearson

ID	Task Name	Duration	Start	Finish	Resource Names
94	Send final results of Content and Bias Sensitivity Review meeting	1 day	Fri 10/2/15	Fri 10/2/15	Pearson
95	**Bias and Sensitivity Review**	**68 days**	**Wed 7/1/15**	**Fri 10/2/15**	
96	Recruit Content Review Participants	10 days	Wed 7/1/15	Tue 7/14/15	Pearson
97	Create training materials for Bias and sensitivity Reviews	10 days	Fri 7/10/15	Thu 7/23/15	Pearson
98	Bias and Sensitivity Review training materials – CDE Review	5 days	Fri 7/24/15	Thu 7/30/15	CDE
99	Edit and ship materials after CDE review	13 days	Fri 7/31/15	Tue 8/18/15	Pearson
100	Bias and Sensitivity Review Meeting	1 day	Thu 8/20/15	Thu 8/20/15	Pearson
101	Implement edits suggested by committee	30 days	Mon 8/24/15	Fri 10/2/15	Pearson
102	Send final results of Content and Bias Sensitivity Review meeting	1 day	Thu 8/27/15	Thu 8/27/15	Pearson
103	**Data Review (for Spring 2016 Operational)**	**48 days**	**Mon 6/1/15**	**Wed 8/5/15**	
104	Recruit Data Review Participants	25 days	Mon 6/1/15	Fri 7/3/15	Pearson
105	Print Data Review Training Materials	10 days	Tue 6/16/15	Mon 6/29/15	Pearson
106	Produce Data Review Training Materials – CDE Review	5 days	Tue 6/30/15	Mon 7/6/15	CDE
107	Edit and ship materials after CDE review	10 days	Tue 7/7/15	Mon 7/20/15	Pearson
108	Conduct Data Review meeting	1 day	Tue 7/21/15	Tue 7/21/15	Pearson
109	Implement edits suggested by committee	10 days	Wed 7/22/15	Tue 8/4/15	Pearson
110	Provide final results of Data Review Meetings	1 day	Wed 8/5/15	Wed 8/5/15	Pearson
111	**Form Development (Spring 2016 Operational and Breach Forms)**	**136 days**	**Wed 7/1/15**	**Wed 1/6/16**	
112	Field Testing Plan	20 days	Wed 7/1/15	Tue 7/28/15	Pearson
113	**Core Test Form Development (Science and Social Studies)**	**50 days**	**Thu 8/6/15**	**Wed 10/14/15**	
114	Construct forms	35 days	Thu 8/6/15	Wed 9/23/15	Pearson
115	CDE reviews forms	5 days	Thu 9/24/15	Wed 9/30/15	CDE
116	Revise forms based on CDE review	5 days	Thu 10/1/15	Wed 10/7/15	Pearson
117	Core Test Form Development – CDE Review Final	5 days	Thu 10/8/15	Wed 10/14/15	CDE
118	Core Test Form Development – Final	0 days	Wed 10/14/15	Wed 10/14/15	Pearson
119	**Embedded Field Test Form Development**	**50 days**	**Thu 10/15/15**	**Wed 12/23/15**	
120	Construct forms	35 days	Thu 10/15/15	Wed 12/2/15	Pearson
121	CDE reviews forms	5 days	Thu 12/3/15	Wed 12/9/15	Pearson
122	Revise forms based on CDE review	5 days	Thu 12/10/15	Wed 12/16/15	CDE
123	Embedded Field Test Form Development – Final	5 days	Thu 12/17/15	Wed 12/23/15	Pearson
124	Send Production ready files to Pearson (Files to Print)	0 days	Wed 12/23/15	Wed 12/23/15	Pearson
125	**Special Populations**	**65 days**	**Wed 7/1/15**	**Tue 9/29/15**	
126	Accommodations Procedures Manual review rounds	60 days	Wed 7/1/15	Tue 9/22/15	Pearson
127	Accommodations Procedures Manual - CDE Review Final	5 days	Wed 9/23/15	Tue 9/29/15	CDE
128	**Certification for District Translators**	**65 days**	**Wed 7/1/15**	**Tue 9/29/15**	
129	Procedures documente produced	60 days	Wed 7/1/15	Tue 9/22/15	Pearson
130	Procedures for Certification for District Translators – CDE Review Final	5 days	Wed 9/23/15	Tue 9/29/15	CDE
131	**Test/Ancillary Material - Development**	**136 days**	**Wed 7/1/15**	**Wed 1/6/16**	
132	District and School Assessment Coordinator review rounds	60 days	Wed 7/1/15	Tue 9/22/15	Pearson
133	Document Development: District and School Assessment Coordinators Manual – CDE Review Final	5 days	Wed 9/23/15	Tue 9/29/15	CDE
134	Examiners Manual review rounds	30 days	Mon 10/12/15	Fri 11/20/15	Pearson
135	Document Development: Examiners Manual – CDE Review Final	5 days	Mon 11/23/15	Fri 11/27/15	CDE
136	Certification Forms review rounds	60 days	Wed 7/1/15	Tue 9/22/15	Pearson
137	Document Development: Certification Forms – CDE Review Final	5 days	Wed 9/23/15	Tue 9/29/15	CDE
138	Document Development: Test Booklets – CDE Review Final	5 days	Thu 12/31/15	Wed 1/6/16	CDE
139	Ancillary Materials (Manipulatives) review rounds	60 days	Wed 7/1/15	Tue 9/22/15	Pearson
140	Document Development: Ancillary Materials – CDE Review Final	5 days	Wed 9/23/15	Tue 9/29/15	CDE

ID	Task Name	Duration	Start	Finish	Resource Names
141	**Assessment Administration**	**566 days**	**Wed 7/1/15**	**Thu 8/31/17**	
142	**Orders for Materials**	**61 days**	**Mon 1/4/16**	**Mon 3/28/16**	
143	Pre-ID File Transfer	0 days	Mon 1/4/16	Mon 1/4/16	CDE
144	Materials Ordering System Operational	0 days	Mon 1/4/16	Mon 1/4/16	Pearson
145	Materials Ordering Window	15 days	Mon 1/4/16	Fri 1/22/16	Pearson
146	Online Rosters Generated	5 days	Mon 1/25/16	Fri 1/29/16	Pearson
147	Additional Materials Ordering Window	20 days	Tue 3/1/16	Mon 3/28/16	Pearson
148	**Test/Ancillary Material - Production**	**141 days**	**Wed 7/1/15**	**Wed 1/13/16**	
149	Proctors Manual Produced	15 days	Mon 11/30/15	Fri 12/18/15	Pearson
150	Test Booklets Produced	15 days	Thu 12/24/15	Wed 1/13/16	CDE
151	Ancillaries Produced	15 days	Wed 9/30/15	Tue 10/20/15	Pearson
152	Accommodated Materials Produced	25 days	Wed 7/1/15	Tue 8/4/15	Pearson
153	Certification Forms Produced	5 days	Wed 9/30/15	Tue 10/6/15	Pearson
154	**Packaging and Delivery**	**21 days**	**Sat 1/2/16**	**Mon 2/1/16**	
155	Colorado Districts in Shipping System	0 days	Mon 1/4/16	Mon 1/4/16	Pearson
156	Packaging Specifications Finalized	0 days	Sat 1/2/16	Sat 1/2/16	Pearson
157	Non-secure Materials Packaged	10 days	Thu 1/14/16	Wed 1/27/16	Pearson
158	Non-secure Materials Shipped	3 days	Thu 1/28/16	Mon 2/1/16	Pearson
159	Non-secure Materials in District	0 days	Mon 2/1/16	Mon 2/1/16	Pearson
160	Secure Materials Packaged	10 days	Thu 1/14/16	Wed 1/27/16	Pearson
161	Secure Materials Shipped	3 days	Thu 1/28/16	Mon 2/1/16	Pearson
162	Secure Materials in District	0 days	Mon 2/1/16	Mon 2/1/16	Pearson
163	**Test Administration**	**20 days**	**Mon 2/29/16**	**Fri 3/25/16**	
164	Operational Test Administration Window - Science and Social Studies	20 days	Mon 2/29/16	Fri 3/25/16	
165	Online Score Submission Window	20 days	Mon 2/29/16	Fri 3/25/16	
166	**Material Return and Verification**	**371 days**	**Tue 3/29/16**	**Thu 8/31/17**	
167	To Be Scored Materials Return Shipment	0 days	Tue 3/29/16	Tue 3/29/16	Pearson
168	Not To Be Scored Materials Return Shipment	0 days	Tue 3/29/16	Tue 3/29/16	Pearson
169	Non-scored Materials Destruction	0 days	Thu 3/2/17	Thu 3/2/17	Pearson
170	Scored Materials Destruction	0 days	Thu 8/31/17	Thu 8/31/17	Pearson
171	Secure Materials Verification – Initial Report	0 days	Tue 4/12/16	Tue 4/12/16	Pearson
172	Secure Materials Verification – Weekly Report	0 days	Tue 4/19/16	Tue 4/19/16	Pearson
173	Secure Materials Verification – Final Report	0 days	Tue 4/26/16	Tue 4/26/16	Pearson
174	**Test Monitoring**	**193 days**	**Wed 7/1/15**	**Fri 3/25/16**	
175	Test Monitoring Protocol review rounds	60 days	Wed 7/1/15	Tue 9/22/15	Pearson
176	Test Monitoring Protocol – CDE Review Final	5 days	Wed 9/23/15	Tue 9/29/15	CDE
177	Test Monitoring Sites Selected	0 days	Fri 1/15/16	Fri 1/15/16	Pearson
178	Test Monitoring Sites Notified – TBD if needed	0 days	Sat 2/13/16	Sat 2/13/16	Pearson
179	Test Monitoring	20 days	Mon 2/29/16	Fri 3/25/16	Pearson
180	**Scoring**	**262 days**	**Wed 7/1/15**	**Thu 6/30/16**	
181	**Scoring Processes**	**262 days**	**Wed 7/1/15**	**Thu 6/30/16**	
182	Scoring Procedures review rounds	40 days	Wed 7/1/15	Tue 8/25/15	Pearson
183	Scoring Procedures - CDE Review Final	5 days	Wed 8/26/15	Tue 9/1/15	CDE
184	Scoring Materials review rounds	50 days	Wed 9/2/15	Tue 11/10/15	Pearson
185	Scoring Materials - CDE Review Final	5 days	Fri 4/29/16	Thu 5/5/16	CDE
186	Scoring Monitors Recruitment	25 days	Wed 7/1/15	Tue 8/4/15	Pearson
187	Scoring Monitors Training	3 days	Wed 8/5/15	Fri 8/7/15	Pearson

EXHIBIT B — Colorado Alternate Schedule - FY2016

ID	Task Name	Duration	Start	Finish	Resource Names
188	**Online Score Submission System**	**152 days**	**Wed 7/1/15**	**Thu 1/28/16**	
189	Baseline System Requirements	80 days	Wed 7/1/15	Tue 10/20/15	Pearson
190	System developed, tested, reviewed with CDE	65 days	Wed 10/21/15	Tue 1/19/16	Pearson
191	Online Score Submission System - CDE Final Review	5 days	Wed 1/20/16	Tue 1/26/16	CDE
192	Create and Generate Teacher User ID's and Passwords	1 day	Wed 1/27/16	Wed 1/27/16	Pearson
193	Online Score Submission System - GO LIVE	0 days	Thu 1/28/16	Thu 1/28/16	Pearson
194	Scoring Guidance Document review rounds	60 days	Fri 4/1/16	Thu 6/23/16	Pearson
195	Scoring Guidance Document - CDE review	5 days	Fri 6/24/16	Thu 6/30/16	CDE
196	Scoring Guidance - Available to Classroom Teachers	0 days	Thu 6/30/16	Thu 6/30/16	Pearson
197	**Reporting of Data Files and Assessment Results**	**248 days**	**Wed 7/1/15**	**Fri 6/10/16**	
198	**Reporting Files - Specs**	**65 days**	**Wed 7/1/15**	**Tue 9/29/15**	
199	Reporting: Data File Layout review rounds	45 days	Wed 7/1/15	Tue 9/1/15	Pearson
200	Reporting: Score Report Shells review rounds	60 days	Wed 7/1/15	Tue 9/22/15	Pearson
201	Reporting: Individual Student Level File Layout - CDE Review Final	5 days	Wed 9/2/15	Tue 9/8/15	CDE
202	Reporting: Individual Student Level Report Shells – CDE Review Final	5 days	Wed 9/23/15	Tue 9/29/15	CDE
203	Reporting: State Level File Layouts – CDE Review Final	5 days	Wed 9/2/15	Tue 9/8/15	CDE
204	Reporting: District Level File Layouts – CDE Review Final	5 days	Wed 9/2/15	Tue 9/8/15	CDE
205	Reporting: District Level Report Shells – CDE Review Final	5 days	Wed 9/23/15	Tue 9/29/15	CDE
206	Reporting: School Level File Layouts – CDE Review Final	5 days	Wed 9/2/15	Tue 9/8/15	CDE
207	Reporting: School Level Report Shells – CDE Review Final	5 days	Wed 9/23/15	Tue 9/29/15	CDE
208	**Reports**	**248 days**	**Wed 7/1/15**	**Fri 6/10/16**	
209	Student Biographical Data Review Window	10 days	Mon 3/28/16	Fri 4/8/16	CO DISTRICTS
210	**Operational Reporting - Science and Social Studies**	**16 days**	**Fri 5/20/16**	**Fri 6/10/16**	
211	Reporting: QC of Individual Student Level File – CDE Review	1 day	Fri 5/20/16	Fri 5/20/16	CDE
212	Reporting: QC of Individual Student Level File – CDE Verification	0 days	Fri 5/20/16	Fri 5/20/16	CDE
213	Reporting: Individual Student Level File Posted	0 days	Fri 5/20/16	Fri 5/20/16	Pearson
214	Reporting: Individual Student Report Bellwethers	2 days	Thu 5/26/16	Fri 5/27/16	CDE
215	Reporting: Individual Student Level File Electronic Reports Posted	0 days	Wed 6/1/16	Wed 6/1/16	Pearson
216	Reporting: Individual Student Level Hard Copy Reports in District	0 days	Fri 6/10/16	Fri 6/10/16	Pearson
217	**Operational Reporting - Standard Setting (Post Standard Setting)**	**16 days**	**Wed 7/1/15**	**Wed 7/22/15**	
218	Reporting: QC of Individual Student Level File – CDE Review	1 day	Wed 7/1/15	Wed 7/1/15	CDE
219	Reporting: QC of Individual Student Level File – CDE Verification	0 days	Wed 7/1/15	Wed 7/1/15	CDE
220	Reporting: Individual Student Level File Posted	0 days	Wed 7/1/15	Wed 7/1/15	Pearson
221	Reporting: Individual Student Report Bellwethers	2 days	Tue 7/7/15	Wed 7/8/15	CDE
222	Reporting: Individual Student Level File Electronic Reports Posted	0 days	Mon 7/13/15	Mon 7/13/15	Pearson
223	Reporting: Individual Student Level Hard Copy Reports in District	0 days	Wed 7/22/15	Wed 7/22/15	Pearson
224	**State Level Files**	**232 days**	**Wed 7/1/15**	**Thu 5/19/16**	
225	Pearson updates scoring system and produces/verifies State Level File	9 days	Mon 5/9/16	Thu 5/19/16	Pearson
226	Reporting: QC of State Level File(s) – CDE Review	2 days	Wed 7/1/15	Thu 7/2/15	CDE
227	Reporting: QC of State Level File(s) – CDE Verification	0 days	Thu 7/2/15	Thu 7/2/15	CDE
228	Reporting: State Level File(s) Posted	0 days	Thu 7/2/15	Thu 7/2/15	Pearson
229	**District Level Files**	**10 days**	**Wed 7/1/15**	**Tue 7/14/15**	
230	Reporting: QC of District Level File(s) – CDE Review	2 days	Wed 7/1/15	Thu 7/2/15	CDE
231	Reporting: QC of District Level File(s) – CDE Verification	0 days	Thu 7/2/15	Thu 7/2/15	CDE
232	Reporting: District Level File(s) Posted	0 days	Thu 7/2/15	Thu 7/2/15	Pearson
233	Reporting: District Reports Bellwethers	2 days	Wed 7/8/15	Thu 7/9/15	CDE
234	Reporting: District Electronic Reports Posted	0 days	Tue 7/14/15	Tue 7/14/15	Pearson

ID	Task Name	Duration	Start	Finish	Resource Names
235	**School Level Files**	**10 days**	**Wed 7/1/15**	**Tue 7/14/15**	
236	Reporting: QC of School Level File(s) – CDE Review	2 days	Wed 7/1/15	Thu 7/2/15	CDE
237	Reporting: QC of School Level File(s) – CDE Verification	0 days	Thu 7/2/15	Thu 7/2/15	CDE
238	Reporting: School Level File(s) Posted	0 days	Thu 7/2/15	Thu 7/2/15	Pearson
239	Reporting: School Reports Bellwethers	2 days	Wed 7/8/15	Thu 7/9/15	CDE
240	Reporting: School Electronic Reports Posted	0 days	Tue 7/14/15	Tue 7/14/15	Pearson
241	**Interpretive Guide**	**65 days**	**Wed 7/1/15**	**Tue 9/29/15**	
242	Interpretive Guide review rounds	60 days	Wed 7/1/15	Tue 9/22/15	Pearson
243	Assessment Interpretive Guide – Review Final	5 days	Wed 9/23/15	Tue 9/29/15	CDE
244	Assessment Interpretive Guide Posted	0 days	Tue 9/29/15	Tue 9/29/15	Pearson
245	**Psychometric, Research, and Technical Activities**	**293 days**	**Wed 7/1/15**	**Mon 8/15/16**	
246	**Field Test and Operational Analysis**	**242 days**	**Wed 7/1/15**	**Thu 6/2/16**	
247	Field Test- Sampling Design	60 days	Wed 7/1/15	Tue 9/22/15	Pearson
248	Psychometric Analysis of Field Test	30 days	Fri 4/22/16	Thu 6/2/16	Pearson
249	Operational Analysis	11 days	Fri 4/22/16	Fri 5/6/16	Pearson
250	CDE Review and Approval of Equating Results	1 day	Mon 5/9/16	Mon 5/9/16	CDE
251	**Equating**	**111 days**	**Wed 7/1/15**	**Wed 12/2/15**	
252	Linking and Equating Presentation to TAC 3	2 days	Tue 12/1/15	Wed 12/2/15	Pearson
253	Alignment Studies	20 days	Wed 7/1/15	Tue 7/28/15	Pearson
254	**TAC Meetings**	**112 days**	**Tue 9/1/15**	**Wed 2/3/16**	
255	TAC Meeting 1	2 days	Tue 9/1/15	Wed 9/2/15	Pearson
256	TAC Meeting 2	2 days	Tue 12/1/15	Wed 12/2/15	Pearson
257	TAC Meeting 3	2 days	Tue 2/2/16	Wed 2/3/16	Pearson
258	**Technical Reports**	**268 days**	**Wed 8/5/15**	**Mon 8/15/16**	
259	Technical Report – Final version to CDE	0 days	Mon 8/15/16	Mon 8/15/16	Pearson
260	Irregularity and Data Forensic Report	10 days	Wed 8/5/15	Tue 8/18/15	Pearson
261	**Training and Support**	**178 days**	**Wed 7/1/15**	**Fri 3/4/16**	
262	Understanding Assessment Results Training Materials review rounds	20 days	Wed 7/1/15	Tue 7/28/15	Pearson
263	Understanding Assessment Results Training Material - CDE Final Review	5 days	Wed 7/29/15	Tue 8/4/15	CDE
264	Understanding Assessment Results Training	5 days	Mon 8/24/15	Fri 8/28/15	Pearson
265	Technology Director Training Material review rounds	60 days	Wed 7/1/15	Tue 9/22/15	Pearson
266	Technology Director Training Material CDE Review Final	5 days	Wed 9/23/15	Tue 9/29/15	CDE
267	Conduct Technology Director Training	5 days	Mon 2/1/16	Fri 2/5/16	Pearson
268	Assessment Administration Training Material review rounds	30 days	Mon 1/4/16	Fri 2/12/16	Pearson
269	Assessment Administration Training Material CDE Review Final	5 days	Mon 2/15/16	Fri 2/19/16	CDE
270	Conduct Assessment Administration Training	5 days	Mon 2/29/16	Fri 3/4/16	Pearson
271	Online Training Support Materials	0 days	Mon 2/8/16	Mon 2/8/16	Pearson
272	**Customer Service**	**261 days**	**Wed 7/1/15**	**Thu 6/30/16**	
273	Customer feedback survey	0 days	Thu 6/30/16	Thu 6/30/16	Pearson
274	Establish DAC Website	20 days	Wed 7/1/15	Tue 7/28/15	Pearson

Colorado Alternate Schedule - FY2017

ID	Task Name	Duration	Start	Finish	Resource Names
0	**CO Alternate Assessment - FY2017**	**542 days**	**Wed 6/1/16**	**Fri 6/29/18**	
1	**START**	**542 days**	**Wed 6/1/16**	**Fri 6/29/18**	
2	**General**	**5 days**	**Fri 7/1/16**	**Thu 7/7/16**	
3	Security Plan updated and rebaselined	5 days	Fri 7/1/16	Thu 7/7/16	Pearson
4	**Program Management**	**304 days**	**Fri 7/1/16**	**Thu 8/31/17**	
5	**Project Schedule**	**9 days**	**Fri 7/1/16**	**Wed 7/13/16**	
6	Draft Project Schedule Created	4 days	Fri 7/1/16	Wed 7/6/16	Pearson
7	Project Schedule - CDE Review	3 days	Thu 7/7/16	Mon 7/11/16	CDE
8	Project Schedule - CDE and Pearson Joint Review	1 day	Tue 7/12/16	Tue 7/12/16	Pearson/CDE
9	Project Schedule Updated and Baselined	1 day	Wed 7/13/16	Wed 7/13/16	Pearson
10	**Project Meetings**	**229 days**	**Fri 7/1/16**	**Wed 5/17/17**	
11	**Project Meeting 1**	**14 days**	**Fri 7/1/16**	**Wed 7/20/16**	
12	Agenda Drafted and Delivered to CDE	2 days	Fri 7/1/16	Mon 7/4/16	Pearson
13	Meeting held (Denver, CO)	2 days	Tue 7/12/16	Wed 7/13/16	
14	Meeting Minutes Distributed	5 days	Thu 7/14/16	Wed 7/20/16	Pearson
15	**Project Meeting 2**	**15 days**	**Thu 9/1/16**	**Wed 9/21/16**	
16	Agenda Drafted and Delivered to CDE	2 days	Thu 9/1/16	Fri 9/2/16	Pearson
17	Meeting held (Denver, CO)	2 days	Tue 9/13/16	Wed 9/14/16	
18	Meeting Minutes Distributed	5 days	Thu 9/15/16	Wed 9/21/16	Pearson
19	**Project Meeting 3 - In person**	**12 days**	**Tue 11/1/16**	**Wed 11/16/16**	
20	Agenda Drafted and Delivered to CDE	2 days	Tue 11/1/16	Wed 11/2/16	Pearson
21	Meeting held (San Antonio, TX)	2 days	Tue 11/8/16	Wed 11/9/16	
22	Meeting Minutes Distributed	5 days	Thu 11/10/16	Wed 11/16/16	Pearson
23	**Project Meeting 4**	**13 days**	**Mon 1/2/17**	**Wed 1/18/17**	
24	Agenda Drafted and Delivered to CDE	2 days	Mon 1/2/17	Tue 1/3/17	Pearson
25	Meeting held (Denver, CO)	2 days	Tue 1/10/17	Wed 1/11/17	
26	Meeting Minutes Distributed	5 days	Thu 1/12/17	Wed 1/18/17	Pearson
27	**Project Meeting 5**	**16 days**	**Wed 3/1/17**	**Wed 3/22/17**	
28	Agenda Drafted and Delivered to CDE	2 days	Wed 3/1/17	Thu 3/2/17	Pearson
29	Meeting held (Denver, CO)	2 days	Tue 3/14/17	Wed 3/15/17	
30	Meeting Minutes Distributed	5 days	Thu 3/16/17	Wed 3/22/17	Pearson
31	**Project Meeting 6 - In person**	**13 days**	**Mon 5/1/17**	**Wed 5/17/17**	
32	Agenda Drafted and Delivered to CDE	2 days	Mon 5/1/17	Tue 5/2/17	Pearson
33	Meeting held (San Antonio, TX)	2 days	Tue 5/9/17	Wed 5/10/17	
34	Meeting Minutes Distributed	5 days	Thu 5/11/17	Wed 5/17/17	Pearson
35	**Monthy Reports**	**241 days**	**Wed 8/3/16**	**Thu 7/6/17**	
36	Jul	0 days	Wed 8/3/16	Wed 8/3/16	Pearson
37	Aug	0 days	Mon 9/5/16	Mon 9/5/16	Pearson
38	Sep	0 days	Wed 10/5/16	Wed 10/5/16	Pearson
39	Oct	0 days	Thu 11/3/16	Thu 11/3/16	Pearson
40	Nov	0 days	Mon 12/5/16	Mon 12/5/16	Pearson
41	Dec	0 days	Wed 1/4/17	Wed 1/4/17	Pearson
42	Jan	0 days	Fri 2/3/17	Fri 2/3/17	Pearson
43	Feb	0 days	Fri 3/3/17	Fri 3/3/17	Pearson
44	Mar	0 days	Wed 4/5/17	Wed 4/5/17	Pearson
45	Apr	0 days	Wed 5/3/17	Wed 5/3/17	Pearson
46	May	0 days	Mon 6/5/17	Mon 6/5/17	Pearson

Colorado Alternate Schedule - FY2017

ID	Task Name	Duration	Start	Finish	Resource Names
47	Jun	0 days	Thu 7/6/17	Thu 7/6/17	Pearson
48	**DAC**	**107 days**	**Wed 10/19/16**	**Thu 3/16/17**	
49	DAC Academy	2 days	Tue 2/21/17	Wed 2/22/17	Pearson
50	DAC Management 1	2 days	Wed 10/19/16	Thu 10/20/16	Pearson
51	DAC Management 2	2 days	Wed 3/15/17	Thu 3/16/17	Pearson
52	**Program Improvement**	**205 days**	**Mon 10/10/16**	**Fri 7/21/17**	
53	Program Improvement Plan - Development	15 days	Thu 12/22/16	Wed 1/11/17	Pearson
54	Program Improvement Plan - Production	15 days	Thu 1/12/17	Wed 2/1/17	Pearson
55	Program Improvement Plan - Shipping and Receipt	15 days	Tue 2/7/17	Mon 2/27/17	Pearson
56	Program Improvement Plan - Administration	15 days	Mon 4/3/17	Fri 4/21/17	Pearson
57	Program Improvement Plan - Scoring	15 days	Fri 1/27/17	Thu 2/16/17	Pearson
58	Program Improvement Plan - Data Processing	15 days	Mon 7/3/17	Fri 7/21/17	Pearson
59	Program Improvement Plan - Reporting and Psychometrics	15 days	Thu 6/15/17	Wed 7/5/17	Pearson
60	Program Improvement Plan - Meetings	15 days	Mon 10/10/16	Fri 10/28/16	Pearson
61	**Invoices**	**239 days**	**Fri 9/30/16**	**Thu 8/31/17**	
62	Invoice Q1	0 days	Fri 9/30/16	Fri 9/30/16	Pearson
63	Invoice Q2	0 days	Fri 12/30/16	Fri 12/30/16	Pearson
64	Invoice Q3	0 days	Fri 3/31/17	Fri 3/31/17	Pearson
65	Invoice Q4	0 days	Thu 6/15/17	Thu 6/15/17	Pearson
66	Invoice - "tail"	0 days	Thu 8/31/17	Thu 8/31/17	Pearson
67	**Assessment Development**	**297 days**	**Wed 6/1/16**	**Thu 7/20/17**	
68	**Style Guide**	**30 days**	**Fri 7/1/16**	**Thu 8/11/16**	
69	Colorado Style Guide - Updates	30 days	Fri 7/1/16	Thu 8/11/16	Pearson
70	Colorado Style Guide - Final for year	0 days	Thu 8/11/16	Thu 8/11/16	Pearson
71	**Item Development (Spring 2018 Field Test)**	**134 days**	**Mon 1/16/17**	**Thu 7/20/17**	
72	Item Writer Recruiting	25 days	Mon 1/16/17	Fri 2/17/17	Pearson
73	Develop Training Materials and Item Development Plans	5 days	Wed 2/15/17	Tue 2/21/17	Pearson
74	Item Development Meeting 1 Materials – CDE Review	5 days	Wed 2/22/17	Tue 2/28/17	CDE
75	Edit materials after CDE review	4 days	Wed 3/1/17	Mon 3/6/17	Pearson
76	Item Development Meeting 1	2 days	Tue 3/7/17	Wed 3/8/17	Pearson
77	Provide developers feedback	51 days	Fri 3/10/17	Fri 5/19/17	Pearson
78	Develop training materials and item development plans (meeting 2)	5 days	Mon 5/22/17	Fri 5/26/17	Pearson
79	Item Writer Recruiting	25 days	Tue 4/25/17	Mon 5/29/17	Pearson
80	Item Development Meeting 2 Materials – CDE Review	3 days	Mon 5/29/17	Wed 5/31/17	CDE
81	Edit materials after CDE review	3 days	Thu 6/1/17	Mon 6/5/17	Pearson
82	Item Development Meeting 2	2 days	Tue 6/6/17	Wed 6/7/17	Pearson
83	Provide developers feedback	10 days	Fri 6/9/17	Thu 6/22/17	Pearson
84	Conduct internal Content and Editorial Reviews	20 days	Fri 6/23/17	Thu 7/20/17	Pearson
85	**Content and Bias Review (Spring 2017 Field Test)**	**65 days**	**Mon 7/11/16**	**Fri 10/7/16**	
86	Item Review – CDE Review (newly written items)	5 days	Wed 7/27/16	Tue 8/2/16	CDE
87	Recruit Content Review Participants	20 days	Mon 7/11/16	Fri 8/5/16	CDE
88	Creates Training materials for Content and Bias/sensitivity Reviews	4 days	Fri 7/29/16	Wed 8/3/16	Pearson
89	Content and Bias/Sensitivity Review Training Materials – CDE Review	3 days	Thu 8/4/16	Mon 8/8/16	Pearson
90	Edit and ship materials after CDE review	10 days	Tue 8/9/16	Mon 8/22/16	CDE
91	Content and Bias Review Meeting	2 days	Tue 8/23/16	Wed 8/24/16	Pearson
92	Implements edits suggested by committee	30 days	Fri 8/26/16	Thu 10/6/16	Pearson
93	Sends final results of Content and Bias Sensitivity Review meeting	1 day	Fri 10/7/16	Fri 10/7/16	Pearson

Colorado Alternate Schedule - FY2017

ID	Task Name	Duration	Start	Finish	Resource Names
94	**Data Review (for Spring 2016 Operational)**	**46 days**	**Wed 6/1/16**	**Wed 8/3/16**	
95	Recruit Data Review Participants	25 days	Wed 6/1/16	Tue 7/5/16	Pearson
96	Print Data Review Training Materials	10 days	Tue 6/14/16	Mon 6/27/16	Pearson
97	Produce Data Review Training Materials – CDE Review	5 days	Tue 6/28/16	Mon 7/4/16	CDE
98	Edit and ship materials after CDE review	10 days	Tue 7/5/16	Mon 7/18/16	Pearson
99	Conduct Data Review meeting	1 day	Tue 7/19/16	Tue 7/19/16	Pearson
100	Implement edits suggested by committee	10 days	Wed 7/20/16	Tue 8/2/16	Pearson
101	Provide final results of Data Review Meetings	1 day	Wed 8/3/16	Wed 8/3/16	Pearson
102	**Form Development (Spring 2016 Operational and Breach Forms)**	**134 days**	**Fri 7/1/16**	**Wed 1/4/17**	
103	Field Testing Plan	20 days	Fri 7/1/16	Thu 7/28/16	Pearson
104	**Core Test Form Development**	**50 days**	**Thu 8/4/16**	**Wed 10/12/16**	
105	Construct forms	35 days	Thu 8/4/16	Wed 9/21/16	Pearson
106	CDE reviews forms	5 days	Thu 9/22/16	Wed 9/28/16	CDE
107	Revise forms based on CDE review	5 days	Thu 9/29/16	Wed 10/5/16	Pearson
108	Core Test Form Development – CDE Review Final	5 days	Thu 10/6/16	Wed 10/12/16	CDE
109	Core Test Form Development – Final	0 days	Wed 10/12/16	Wed 10/12/16	Pearson
110	**Embedded Field Test Form Development**	**50 days**	**Thu 10/13/16**	**Wed 12/21/16**	
111	Construct forms	35 days	Thu 10/13/16	Wed 11/30/16	Pearson
112	CDE reviews forms	5 days	Thu 12/1/16	Wed 12/7/16	Pearson
113	Revise forms based on CDE review	5 days	Thu 12/8/16	Wed 12/14/16	CDE
114	Embedded Field Test Form Development – Final	5 days	Thu 12/15/16	Wed 12/21/16	Pearson
115	Send Production ready files to Pearson (Files to Print)	0 days	Wed 12/21/16	Wed 12/21/16	Pearson
116	**Special Populations**	**65 days**	**Fri 7/1/16**	**Thu 9/29/16**	
117	Accommodations Procedures Manual review rounds	60 days	Fri 7/1/16	Thu 9/22/16	Pearson
118	Accommodations Procedures Manual - CDE Review Final	5 days	Fri 9/23/16	Thu 9/29/16	CDE
119	**Certification for District Translators**	**65 days**	**Fri 7/1/16**	**Thu 9/29/16**	
120	Procedures documente produced	60 days	Fri 7/1/16	Thu 9/22/16	Pearson
121	Procedures for Certification for District Translators – CDE Review Final	5 days	Fri 9/23/16	Thu 9/29/16	CDE
122	**Test/Ancillary Material - Development**	**134 days**	**Fri 7/1/16**	**Wed 1/4/17**	**Pearson**
123	District and School Assessment Coordinator review rounds	60 days	Fri 7/1/16	Thu 9/22/16	Pearson
124	Document Development: District and School Assessment Coordinators Manual – CDE Review Final	5 days	Fri 9/23/16	Thu 9/29/16	CDE
125	Examiners Manual review rounds	30 days	Mon 10/10/16	Fri 11/18/16	Pearson
126	Document Development: Examiners Manual – CDE Review Final	5 days	Mon 11/21/16	Fri 11/25/16	CDE
127	Certification Forms review rounds	60 days	Fri 7/1/16	Thu 9/22/16	Pearson
128	Document Development: Certification Forms – CDE Review Final	5 days	Fri 9/23/16	Thu 9/29/16	CDE
129	Document Development: Test Booklets – CDE Review Final	5 days	Thu 12/29/16	Wed 1/4/17	CDE
130	Ancillary Materials (Manipulatives) review rounds	60 days	Fri 7/1/16	Thu 9/22/16	Pearson
131	Document Development: Ancillary Materials – CDE Review Final	5 days	Fri 9/23/16	Thu 9/29/16	CDE
132	**Assessment Administration**	**520 days**	**Fri 7/1/16**	**Fri 6/29/18**	
133	**Orders for Materials**	**64 days**	**Tue 1/3/17**	**Fri 3/31/17**	
134	Pre-ID File Transfer	0 days	Tue 1/3/17	Tue 1/3/17	CDE
135	Materials Ordering System Operational	0 days	Tue 1/3/17	Tue 1/3/17	Pearson
136	Materials Ordering Window	15 days	Tue 1/3/17	Mon 1/23/17	Pearson
137	Online Rosters Generated	5 days	Tue 1/24/17	Mon 1/30/17	Pearson
138	Additional Materials Ordering Window	20 days	Mon 3/6/17	Fri 3/31/17	Pearson
139	**Test/Ancillary Material - Production**	**139 days**	**Fri 7/1/16**	**Wed 1/11/17**	
140	Proctors Manual Produced	15 days	Mon 11/28/16	Fri 12/16/16	Pearson

Colorado Alternate Schedule - FY2017

ID	Task Name	Duration	Start	Finish	Resource Names
141	Test Booklets Produced	15 days	Thu 12/22/16	Wed 1/11/17	CDE
142	Ancillaries Produced	15 days	Fri 9/30/16	Thu 10/20/16	Pearson
143	Accommodated Materials Produced	20 days	Fri 7/1/16	Thu 7/28/16	Pearson
144	Certification Forms Produced	5 days	Fri 9/30/16	Thu 10/6/16	Pearson
145	**Packaging and Delivery**	**26 days**	**Mon 1/2/17**	**Mon 2/6/17**	
146	Colorado Districts in Shipping System	0 days	Tue 1/3/17	Tue 1/3/17	Pearson
147	Packaging Specifications Finalized	0 days	Mon 1/2/17	Mon 1/2/17	Pearson
148	Non-secure Materials Packaged	15 days	Thu 1/12/17	Wed 2/1/17	Pearson
149	Non-secure Materials Shipped	3 days	Thu 2/2/17	Mon 2/6/17	Pearson
150	Non-secure Materials in District	0 days	Mon 2/6/17	Mon 2/6/17	Pearson
151	Secure Materials Packaged	15 days	Thu 1/12/17	Wed 2/1/17	Pearson
152	Secure Materials Shipped	3 days	Thu 2/2/17	Mon 2/6/17	Pearson
153	Secure Materials in District	0 days	Mon 2/6/17	Mon 2/6/17	Pearson
154	**Test Administration**	**20 days**	**Mon 3/6/17**	**Fri 3/31/17**	
155	Operational Test Administration Window	20 days	Mon 3/6/17	Fri 3/31/17	
156	Online Score Submission Window	20 days	Mon 3/6/17	Fri 3/31/17	
157	**Material Return and Verification**	**322 days**	**Tue 4/4/17**	**Fri 6/29/18**	
158	To Be Scored Materials Return Shipment	0 days	Tue 4/4/17	Tue 4/4/17	Pearson
159	Not To Be Scored Materials Return Shipment	0 days	Tue 4/4/17	Tue 4/4/17	Pearson
160	Non-scored Materials Destruction	0 days	Fri 12/29/17	Fri 12/29/17	Pearson
161	Scored Materials Destruction	0 days	Fri 6/29/18	Fri 6/29/18	Pearson
162	Secure Materials Verification – Initial Report	0 days	Tue 4/18/17	Tue 4/18/17	Pearson
163	Secure Materials Verification – Weekly Report	0 days	Tue 4/25/17	Tue 4/25/17	Pearson
164	Secure Materials Verification – Final Report	0 days	Tue 5/2/17	Tue 5/2/17	Pearson
165	**Test Monitoring**	**196 days**	**Fri 7/1/16**	**Fri 3/31/17**	
166	Test Monitoring Protocol review rounds	60 days	Fri 7/1/16	Thu 9/22/16	Pearson
167	Test Monitoring Protocol – CDE Review Final	5 days	Fri 9/23/16	Thu 9/29/16	CDE
168	Test Monitoring Sites Selected	0 days	Mon 1/16/17	Mon 1/16/17	Pearson
169	Test Monitoring Sites Notified – TBD if needed	0 days	Mon 2/13/17	Mon 2/13/17	Pearson
170	Test Monitoring	20 days	Mon 3/6/17	Fri 3/31/17	Pearson
171	**Scoring**	**261 days**	**Fri 7/1/16**	**Fri 6/30/17**	
172	**Scoring Processes**	**261 days**	**Fri 7/1/16**	**Fri 6/30/17**	
173	Scoring Procedures review rounds	40 days	Fri 7/1/16	Thu 8/25/16	Pearson
174	Scoring Procedures - CDE Review Final	5 days	Fri 8/26/16	Thu 9/1/16	CDE
175	Scoring Materials review rounds	50 days	Fri 9/2/16	Thu 11/10/16	Pearson
176	Scoring Materials - CDE Review Final	5 days	Wed 4/26/17	Tue 5/2/17	CDE
177	Scoring Monitors Recruitment	25 days	Fri 7/1/16	Thu 8/4/16	Pearson
178	Scoring Monitors Training	3 days	Fri 8/5/16	Tue 8/9/16	Pearson
179	**Online Score Submission System**	**151 days**	**Fri 7/1/16**	**Fri 1/27/17**	
180	Baseline System Requirements	80 days	Fri 7/1/16	Thu 10/20/16	Pearson
181	System developed, tested, reviewed with CDE	65 days	Fri 10/21/16	Thu 1/19/17	Pearson
182	Online Score Submission System - CDE Final Review	5 days	Fri 1/20/17	Thu 1/26/17	CDE
183	Create and Generate Teacher User ID's and Passwords	1 day	Fri 1/27/17	Fri 1/27/17	Pearson
184	Online Score Submission System - GO LIVE	0 days	Mon 7/4/16	Mon 7/4/16	Pearson
185	Scoring Guidance Document review rounds	60 days	Mon 4/3/17	Fri 6/23/17	Pearson
186	Scoring Guidance Document - CDE review	5 days	Mon 6/26/17	Fri 6/30/17	CDE
187	Scoring Guidance - Available to Classroom Teachers	0 days	Fri 6/30/17	Fri 6/30/17	Pearson

Colorado Alternate Schedule - FY2017

ID	Task Name	Duration	Start	Finish	Resource Names
188	**Reporting of Data Files and Assessment Results**	**249 days**	**Fri 7/1/16**	**Wed 6/14/17**	
189	**Reporting Files - Specs**	**65 days**	**Fri 7/1/16**	**Thu 9/29/16**	
190	Reporting: Data File Layout review rounds	45 days	Fri 7/1/16	Thu 9/1/16	Pearson
191	Reporting: Score Report Shells review rounds	60 days	Fri 7/1/16	Thu 9/22/16	Pearson
192	Reporting: Individual Student Level File Layout - CDE Review Final	5 days	Fri 9/2/16	Thu 9/8/16	CDE
193	Reporting: Individual Student Level Report Shells – CDE Review Final	5 days	Fri 9/23/16	Thu 9/29/16	CDE
194	Reporting: State Level File Layouts – CDE Review Final	5 days	Fri 9/2/16	Thu 9/8/16	CDE
195	Reporting: District Level File Layouts – CDE Review Final	5 days	Fri 9/2/16	Thu 9/8/16	CDE
196	Reporting: District Level Report Shells – CDE Review Final	5 days	Fri 9/23/16	Thu 9/29/16	CDE
197	Reporting: School Level File Layouts – CDE Review Final	5 days	Fri 9/2/16	Thu 9/8/16	CDE
198	Reporting: School Level Report Shells – CDE Review Final	5 days	Fri 9/23/16	Thu 9/29/16	CDE
199	**Reports**	**53 days**	**Mon 4/3/17**	**Wed 6/14/17**	
200	Student Biographical Data Review Window	10 days	Mon 4/3/17	Fri 4/14/17	CO DISTRICTS
201	**Operational Reporting**	**16 days**	**Wed 5/24/17**	**Wed 6/14/17**	
202	Reporting: QC of Individual Student Level File – CDE Review	1 day	Wed 5/24/17	Wed 5/24/17	CDE
203	Reporting: QC of Individual Student Level File – CDE Verification	0 days	Wed 5/24/17	Wed 5/24/17	CDE
204	Reporting: Individual Student Level File Posted	0 days	Wed 5/24/17	Wed 5/24/17	Pearson
205	Reporting: Individual Student Report Bellwethers	2 days	Tue 5/30/17	Wed 5/31/17	CDE
206	Reporting: Individual Student Level File Electronic Reports Posted	0 days	Mon 6/5/17	Mon 6/5/17	Pearson
207	Reporting: Individual Student Level Hard Copy Reports in District	0 days	Wed 6/14/17	Wed 6/14/17	Pearson
208	**State Level Files**	**8 days**	**Tue 5/16/17**	**Thu 5/25/17**	
209	Pearson updates scoring system and produces/verifies State Level File	6 days	Tue 5/16/17	Tue 5/23/17	Pearson
210	Reporting: QC of State Level File(s) – CDE Review	2 days	Wed 5/24/17	Thu 5/25/17	CDE
211	Reporting: QC of State Level File(s) – CDE Verification	0 days	Thu 5/25/17	Thu 5/25/17	CDE
212	Reporting: State Level File(s) Posted	0 days	Thu 5/25/17	Thu 5/25/17	Pearson
213	**District Level Files**	**10 days**	**Wed 5/24/17**	**Tue 6/6/17**	
214	Reporting: QC of District Level File(s) – CDE Review	2 days	Wed 5/24/17	Thu 5/25/17	CDE
215	Reporting: QC of District Level File(s) – CDE Verification	0 days	Thu 5/25/17	Thu 5/25/17	CDE
216	Reporting: District Level File(s) Posted	0 days	Thu 5/25/17	Thu 5/25/17	Pearson
217	Reporting: District Reports Bellwethers	2 days	Wed 5/31/17	Thu 6/1/17	CDE
218	Reporting: District Electronic Reports Posted	0 days	Tue 6/6/17	Tue 6/6/17	Pearson
219	**School Level Files**	**10 days**	**Wed 5/24/17**	**Tue 6/6/17**	
220	Reporting: QC of School Level File(s) – CDE Review	2 days	Wed 5/24/17	Thu 5/25/17	CDE
221	Reporting: QC of School Level File(s) – CDE Verification	0 days	Thu 5/25/17	Thu 5/25/17	CDE
222	Reporting: School Level File(s) Posted	0 days	Thu 5/25/17	Thu 5/25/17	Pearson
223	Reporting: School Reports Bellwethers	2 days	Wed 5/31/17	Thu 6/1/17	CDE
224	Reporting: School Electronic Reports Posted	0 days	Tue 6/6/17	Tue 6/6/17	Pearson
225	**Interpretive Guide**	**65 days**	**Fri 7/1/16**	**Thu 9/29/16**	
226	Interpretive Guide review rounds	60 days	Fri 7/1/16	Thu 9/22/16	Pearson
227	Assessment Interpretive Guide – Review Final	5 days	Fri 9/23/16	Thu 9/29/16	CDE
228	Assessment Interpretive Guide Posted	0 days	Thu 9/29/16	Thu 9/29/16	Pearson
229	**Psychometric, Research, and Technical Activities**	**292 days**	**Fri 7/1/16**	**Tue 8/15/17**	
230	**Field Test and Operational Analysis**	**245 days**	**Fri 7/1/16**	**Thu 6/8/17**	
231	Field Test- Sampling Design	60 days	Fri 7/1/16	Thu 9/22/16	Pearson
232	Psychometric Analysis of Field Test	30 days	Fri 4/28/17	Thu 6/8/17	Pearson
233	Operational Analysis	11 days	Fri 4/28/17	Fri 5/12/17	Pearson
234	CDE Review and Approval of Equating Results	1 day	Mon 5/15/17	Mon 5/15/17	CDE

Colorado Alternate Schedule - FY2017

ID	Task Name	Duration	Start	Finish	Resource Names
235	**TAC Meetings**	**112 days**	**Tue 9/6/16**	**Wed 2/8/17**	
236	TAC Meeting 1	2 days	Tue 9/6/16	Wed 9/7/16	Pearson
237	TAC Meeting 2	2 days	Tue 12/6/16	Wed 12/7/16	Pearson
238	TAC Meeting 3	2 days	Tue 2/7/17	Wed 2/8/17	Pearson
239	**Technical Reports**	**86 days**	**Mon 4/17/17**	**Tue 8/15/17**	
240	Technical Report – Final version to CDE	0 days	Tue 8/15/17	Tue 8/15/17	Pearson
241	Irregularity and Data Forensic Report	10 days	Mon 4/17/17	Fri 4/28/17	Pearson
242	**Training and Support**	**176 days**	**Fri 7/1/16**	**Fri 3/3/17**	
243	Understanding Assessment Results Training Materials review rounds	20 days	Fri 7/1/16	Thu 7/28/16	Pearson
244	Understanding Assessment Results Training Material - CDE Final Review	5 days	Fri 7/29/16	Thu 8/4/16	CDE
245	Understanding Assessment Results Training	5 days	Mon 8/22/16	Fri 8/26/16	Pearson
246	Technology Director Training Material review rounds	60 days	Fri 7/1/16	Thu 9/22/16	Pearson
247	Technology Director Training Material CDE Review Final	5 days	Fri 9/23/16	Thu 9/29/16	CDE
248	Conduct Technology Director Training	5 days	Mon 2/6/17	Fri 2/10/17	Pearson
249	Assessment Administration Training Material review rounds	30 days	Mon 1/2/17	Fri 2/10/17	Pearson
250	Assessment Administration Training Material CDE Review Final	5 days	Mon 2/13/17	Fri 2/17/17	CDE
251	Conduct Assessment Administration Training	5 days	Mon 2/27/17	Fri 3/3/17	Pearson
252	Online Training Support Materials	0 days	Mon 2/6/17	Mon 2/6/17	Pearson
253	**Customer Service**	**21 days**	**Thu 6/30/16**	**Thu 7/28/16**	
254	Customer feedback survey	0 days	Thu 6/30/16	Thu 6/30/16	Pearson
255	Establish DAC Website	20 days	Fri 7/1/16	Thu 7/28/16	Pearson
256	**"Tail" Activities**	**329 days**	**Wed 6/1/16**	**Tue 9/5/17**	
257	**Program Management**	**23 days**	**Thu 8/3/17**	**Tue 9/5/17**	
258	Project Meeting - Close out	2 days	Tue 8/15/17	Wed 8/16/17	Pearson
259	Transition Plan - End of Contract	0 days	Thu 8/31/17	Thu 8/31/17	Pearson
260	**Monthly Reports**	**23 days**	**Thu 8/3/17**	**Tue 9/5/17**	
261	Jul	0 days	Thu 8/3/17	Thu 8/3/17	Pearson
262	Aug	0 days	Tue 9/5/17	Tue 9/5/17	Pearson
263	**Assessment Development**	**327 days**	**Wed 6/1/16**	**Thu 8/31/17**	
264	**Content and Bias Review - (Spring 2018 Field Test)**	**54 days**	**Mon 6/19/17**	**Thu 8/31/17**	
265	Item Review – CDE Review (newly written items)	5 days	Mon 7/17/17	Fri 7/21/17	Pearson
266	Recruit Content Review Participants	20 days	Mon 6/19/17	Fri 7/14/17	CDE
267	Create materials for Content and Bias/sensitivity Reviews	11 days	Fri 6/30/17	Fri 7/14/17	Pearson
268	Content and Bias/Sensitivity Review Materials – CDE Review	3 days	Mon 7/17/17	Wed 7/19/17	Pearson
269	Edit materials after CDE review	3 days	Thu 7/20/17	Mon 7/24/17	CDE
270	Content and Bias Review Meeting	2 days	Tue 7/25/17	Wed 7/26/17	Pearson
271	Implement edits suggested by committee	25 days	Fri 7/28/17	Thu 8/31/17	Pearson
272	Send final results of Content and Bias Sensitivity Review meeting	0 days	Thu 8/31/17	Thu 8/31/17	CDE
273	**Data Review (for Spring 2018 Operational)**	**300 days**	**Wed 6/1/16**	**Tue 7/25/17**	**Pearson**
274	Recruit Data Review Participants	25 days	Wed 6/1/16	Tue 7/5/16	Pearson
275	Print Data Review Meeting Materials	12 days	Tue 6/13/17	Wed 6/28/17	Pearson
276	Produce Data Review Materials – CDE Review	5 days	Thu 6/29/17	Wed 7/5/17	Pearson
277	Edit materials after CDE review	3 days	Thu 7/6/17	Mon 7/10/17	Pearson
278	Conduct Data Review meeting	1 day	Tue 7/11/17	Tue 7/11/17	Pearson
279	Provide final results of Data Review Meetings	10 days	Wed 7/12/17	Tue 7/25/17	Pearson

Exhibit C: Liquidated Damages Dates

Schedule A: Summative Assessment Deliverables Subject to Liquidated Damages

Deliverable	Deliverable Date	Dollar Amount
Non-secure Materials In District	04/14/2013 03/31/2014	$ 250 per day
Secure Materials In District	03/31/2014	$1,000 per day
Pearson Online Testing Training Center Available for District Use	02/01/2013 02/03/2014	$500 per day
Online Test Delivery System Demonstration	02/28/2013 02/17/2014	$250 per day
Standard Setting Results	06/23/2014	$1,000 per day
Forms Available for Online Test Delivery System/Proctor Caching	04/24/2013 03/31/2014	$1,000 per day
Reporting: Individual Student Level File Posted	07/29/2014	$5,000 per day
Reporting: Individual Student Level File Electronic Reports Posted	08/05/2014	$5,000 per day
Reporting: Individual Student Level Hard Copy Reports in District	08/20/2014	$1,000 per day
Reporting: State Level File(s) Posted	07/29/2014	$1,000 per day
Reporting: District Level File(s) Posted	07/29/2014	$1,000 per day
Reporting: District Electronic Reports Posted	08/08/2014	$1,000 per day
Reporting: School Level File(s) Posted	07/29/2014	$1,000 per day
Reporting: School Electronic Reports Posted	08/08/2014	$1,000 per day
Assessment Interpretive Guide Posted	08/05/2014	$1,000 per day
Technical Report – Final version to CDE	08/15/2014	$250 per day

Schedule B: Alternate Assessment Deliverables Subject to Liquidated Damages

Deliverable	Deliverable Date	Dollar Amount
Non-secure Materials Available to Districts	04/08/2013 03/31/2014	$100 per day
Secure Materials In District: Science and Social Studies Field Test Science and Social Studies Operational	 04/08/2013 03/31/2014	$1,000 per day
Pearson Online Scorer Entry Training Center Available for District Use	02/01/2013 02/03/2014	$500 per day
Standard Setting Results	07/01/2014	$1,000 per day
Online scoring system ready for CDE review	03/22/2013 03/24/2014	$100 per day
Reporting: Individual Student Level File Posted	07/29/2014	$5,000 per day
Reporting: Individual Student Level File Electronic Reports Posted	08/05/2014	$5,000 per day
Reporting: Individual Student Level Hard Copy Reports in District	08/20/2014	$1,000 per day
Reporting: State Level File(s) Posted	07/29/2014	$1,000 per day
Reporting: District Level File(s) Posted	07/29/2014	$1,000 per day
Reporting: District Electronic Reports Posted	08/08/2014	$1,000 per day
Reporting: School Level File(s) Posted	07/29/2014	$1,000 per day
Reporting: School Electronic Reports Posted	08/08/2014	$1,000 per day
Assessment Interpretive Guide Posted	08/05/2014	$1,000 per day
Technical Report – Final version to CDE	08/15/2014	$250 per day

Document Title	Document Description	Estimated number of Pages	Estimated number of forms	Print Qty
Other Non-Scannable Printed Materials (Manuals, etc.)				
DISTRICT AND SCHOOL COORDINATOR MANUAL FOR FIELD TEST	Printable PDF, posted for Colorado teacher download.	36	1	PDF
TEACHER/PROCTOR MANUAL FOR SCIENCE GRADE 05	Printable PDF, posted for Colorado teacher download.	24	1	PDF
TEACHER/PROCTOR MANUAL FOR SCIENCE GRADE 08	Printable PDF, posted for Colorado teacher download.	24	1	PDF
TEACHER/PROCTOR MANUAL FOR SCIENCE GRADE 11	Printable PDF, posted for Colorado teacher download.	24	1	PDF
TEACHER/PROCTOR MANUAL FOR SOCIAL STUDIES GRADE 04	Printable PDF, posted for Colorado teacher download.	24	1	PDF
TEACHER/PROCTOR MANUAL FOR SOCIAL STUDIES GRADE 07	Printable PDF, posted for Colorado teacher download.	24	1	PDF
TEACHER/PROCTOR MANUAL FOR SOCIAL STUDIES GRADE 11	Printable PDF, posted for Colorado teacher download.	24	1	PDF
Online Test Administrations				
SCIENCE ONLINE FIELD TEST GR 05	ONLINE TEST FORM	N/A	5	N/A
SCIENCE ONLINE FIELD TEST GR 08	ONLINE TEST FORM	N/A	5	N/A
SCIENCE ONLINE FIELD TEST GR 11	ONLINE TEST FORM	N/A	5	N/A
SOCIAL STUDIES ONLINE FT GR 4	ONLINE TEST FORM	N/A	4	N/A
SOCIAL STUDIES ONLINE FT GR 7	ONLINE TEST FORM	N/A	4	N/A
SOCIAL STUDIES ONLINE FT GR11	ONLINE TEST FORM	N/A	4	N/A

Document Title	Document Description	Estimated number of Pages	Estimated number of forms	Print Qty
Scannable Materials				
SCIENCE ANSWER DOCUMENT, PAPER ACCOMMODATION, GR 05	scannable book, .166 (6x6 layout), 8.5x11, mark reflex, black plus one additional color (dropout black), 60# offset, saddle-stitched, corner cut, matching lithocode	20	1	700
SCIENCE ANSWER DOCUMENT, PAPER ACCOMMODATION, GR 08	scannable book, .166 (6x6 layout), 8.5x11, mark reflex, black plus one additional color (dropout black), 60# offset, saddle-stitched, corner cut, matching lithocode	20	1	700
SCIENCE ANSWER DOCUMENT, PAPER ACCOMMODATION, GR 11	scannable book, .166 (6x6 layout), 8.5x11, mark reflex, black plus one additional color (dropout black), 60# offset, saddle-stitched, corner cut, matching lithocode	20	1	700
SOCIAL STUDIES ANSWER DOCUMENT, PAPER ACCOMMODATION, GR 04	scannable book, .166 (6x6 layout), 8.5x11, mark reflex, black plus one additional color, 60# offset, saddle-stitched, corner cut, matching lithocode	20	1	700
SOCIAL STUDIES ANSWER DOCUMENT, PAPER ACCOMMODATION, GR 07	scannable book, .166 (6x6 layout), 8.5x11, mark reflex, black plus one additional color, 60# offset, saddle-stitched, corner cut, matching lithocode	20	1	700
SOCIAL STUDIES ANSWER DOCUMENT, PAPER ACCOMMODATION, GR 11	scannable book, .166 (6x6 layout), 8.5x11, mark reflex, black plus one additional color, 60# offset, saddle-stitched, corner cut, matching lithocode	20	1	700
Scannable Headers				
DISTRICT/SCHOOL/GRADE/SUBJECT HEADER	scannable sheet, 166 (6x6 layout), 9.5x11, mark reflex, black plus one additional color, 60# offset, continuous, lithocode front/back	2	1	6,000
Non-scannable Test Books				

SCIENCE PAPER ACCOMMODATION TEST BOOKLET, GR 05	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints one GRAYSCALE plus black on cover, GRAYSCALE plus black all interior	64	1	700
SCIENCE PAPER ACCOMMODATION TEST BOOKLET, GR 08	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints one GRAYSCALE plus black on cover, GRAYSCALE plus black all interior	64	1	700
SCIENCE PAPER ACCOMMODATION TEST BOOKLET, GR 11	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints one GRAYSCALE plus black on cover, GRAYSCALE plus black all interior	64	1	700
SOCIAL STUDIES PAPER ACCOMMODATION TEST BOOKLET, GR 04	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints one GRAYSCALE plus black on cover, GRAYSCALE plus black all interior	64	8	700
SOCIAL STUDIES PAPER ACCOMMODATION TEST BOOKLET, GR 07	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints one GRAYSCALE plus black on cover, GRAYSCALE plus black all interior	64	8	700
SOCIAL STUDIES PAPER ACCOMMODATION TEST BOOKLET, GR 11	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints one GRAYSCALE plus black on cover, GRAYSCALE plus black all interior	64	8	700
Large Print				
SCIENCE LARGE PRINT TEST BOOKLET, GR 05	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints one GRAYSCALE plus black on cover, GRAYSCALE plus black all interior	64	1	35
SCIENCE LARGE PRINT TEST BOOKLET, GR 08	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints one GRAYSCALE plus black on cover, GRAYSCALE plus black all interior	64	1	35

SCIENCE LARGE PRINT TEST BOOKLET, GR 11	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints one GRAYSCALE plus black on cover, GRAYSCALE plus black all interior	64	1	35
SOCIAL STUDIES LARGE PRINT TEST BOOKLET, GR 04	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints one GRAYSCALE plus black on cover, GRAYSCALE plus black all interior	64	1	35
SOCIAL STUDIES LARGE PRINT TEST BOOKLET, GR 07	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints one GRAYSCALE plus black on cover, GRAYSCALE plus black all interior	64	1	35
SOCIAL STUDIES LARGE PRINT TEST BOOKLET, GR 11	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints one GRAYSCALE plus black on cover, GRAYSCALE plus black all interior	64	1	35
Braille				
SCIENCE BRAILLE TEST BOOKLET, GR 05	Contracted Braille: 11-1/2x11" Manila 100# stock	160	1	6
SCIENCE BRAILLE TEST BOOKLET, GR 08	Contracted Braille: 11-1/2x11" Manila 100# stock	160	1	6
SCIENCE BRAILLE TEST BOOKLET, GR 11	Contracted Braille: 11-1/2x11" Manila 100# stock	160	1	6
SOCIAL STUDIES BRAILLE TEST BOOKLET, GR 04	Contracted Braille: 11-1/2x11" Manila 100# stock	160	1	6
SOCIAL STUDIES BRAILLE TEST BOOKLET, GR 07	Contracted Braille: 11-1/2x11" Manila 100# stock	160	1	6
SOCIAL STUDIES BRAILLE TEST BOOKLET, GR 11	Contracted Braille: 11-1/2x11" Manila 100# stock	160	1	6
Non-Printed Non-Stock Materials				
TEACHER READ DIRECTIONS, SOCIAL STUDIES GRADE 04	Printable PDF, posted for Colorado teacher download.	8	1	PDF
TEACHER READ DIRECTIONS, SOCIAL STUDIES GRADE 07	Printable PDF, posted for Colorado teacher download.	8	1	PDF
TEACHER READ DIRECTIONS, SOCIAL STUDIES, GRADE 11	Printable PDF, posted for Colorado teacher download.	8	1	PDF

TEACHER READ DIRECTIONS, SCIENCE, GRADE 05	Printable PDF, posted for Colorado teacher download.	8	1	PDF
TEACHER READ DIRECTIONS, SCIENCE, GRADE 08	Printable PDF, posted for Colorado teacher download.	8	1	PDF
TEACHER READ DIRECTIONS, SCIENCE, GRADE 11	Printable PDF, posted for Colorado teacher download.	8	1	PDF
ORAL SCRIPTS, SOCIAL STUDIES, GRADE 04	Printable PDF, posted for Colorado teacher download.	8	1	PDF
ORAL SCRIPTS, SOCIAL STUDIES, GRADE 07	Printable PDF, posted for Colorado teacher download.	8	1	PDF
ORAL SCRIPTS, SOCIAL STUDIES, GRADE 11	Printable PDF, posted for Colorado teacher download.	8	1	PDF
ORAL SCRIPTS, SCIENCE, GRADE 05	Printable PDF, posted for Colorado teacher download.	8	1	PDF
ORAL SCRIPTS, SCIENCE, GRADE 08	Printable PDF, posted for Colorado teacher download.	8	1	PDF
ORAL SCRIPTS, SCIENCE, GRADE 11	Printable PDF, posted for Colorado teacher download.	8	1	PDF
ORAL SCRIPTS, SPANISH, SCIENCE, GRADE 05	Printable PDF, posted for Colorado teacher download.	8	1	PDF
ORAL SCRIPTS, SPANISH, SCIENCE, GRADE 08	Printable PDF, posted for Colorado teacher download.	8	1	PDF
ORAL SCRIPTS, SPANISH, SCIENCE, GRADE 11	Printable PDF, posted for Colorado teacher download.	8	1	PDF
ORAL SCRIPTS, SPANISH, SOCIAL STUDIES, GRADE 04	Printable PDF, posted for Colorado teacher download.	8	1	PDF
ORAL SCRIPTS, SPANISH, SOCIAL STUDIES, GRADE 07	Printable PDF, posted for Colorado teacher download.	8	1	PDF
ORAL SCRIPTS, SPANISH, SOCIAL STUDIES, GRADE 11	Printable PDF, posted for Colorado teacher download.	8	1	PDF
Other Non-Scannable Printed Materials (Manuals, etc.)				
DISTRICT AND SCHOOL COORDINATOR MANUAL FOR FIELD TEST	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints black on white	36	1	2,300
TEACHER/PROCTOR MANUAL FOR SCIENCE GRADE 05	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints black on white	24	1	4,400

TEACHER/PROCTOR MANUAL FOR SCIENCE GRADE 08	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints black on white	24	1	4,100
TEACHER/PROCTOR MANUAL FOR SOCIAL STUDIES GRADE 04	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints black on white	24	1	4,400
TEACHER/PROCTOR MANUAL FOR SOCIAL STUDIES GRADE 07	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints black on white	24	1	4,200
TEACHER/PROCTOR MANUAL FOR SCIENCE & SOCIAL STUDIES GRADE 11	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints black on white	24	1	8,000
Online Test Administrations				
SCIENCE ONLINE OPERATIONAL TEST GR 05	ONLINE TEST FORM	N/A	8	N/A
SCIENCE ONLINE OPERATIONAL TEST GR 08	ONLINE TEST FORM	N/A	8	N/A
SCIENCE ONLINE OPERATIONAL TEST GR 11	ONLINE TEST FORM	N/A	8	N/A
SOCIAL STUDIES ONLINE OPERATIONAL TEST GR 4	ONLINE TEST FORM	N/A	4	N/A
SOCIAL STUDIES ONLINE OPERATIONAL TEST GR 7	ONLINE TEST FORM	N/A	4	N/A
SOCIAL STUDIES ONLINE OPERATIONAL TEST GR11	ONLINE TEST FORM	N/A	4	N/A

Document Title	Document Description	Estimated number of Pages	Estimated number of forms	Print Qty
Scannable Materials				
SCIENCE ANSWER DOCUMENT, PAPER ACCOMMODATION, GR 05	scannable book, .166 (6x6 layout), 8.5x11, mark reflex, black plus one additional color (dropout black), 60# offset, saddle-stitched, corner cut, matching lithocode	20	1	700
SCIENCE ANSWER DOCUMENT, PAPER ACCOMMODATION, GR 08	scannable book, .166 (6x6 layout), 8.5x11, mark reflex, black plus one additional color (dropout black), 60# offset, saddle-stitched, corner cut, matching lithocode	20	1	700
SCIENCE ANSWER DOCUMENT, PAPER ACCOMMODATION, GR 11	scannable book, .166 (6x6 layout), 8.5x11, mark reflex, black plus one additional color (dropout black), 60# offset, saddle-stitched, corner cut, matching lithocode	20	1	700
SOCIAL STUDIES ANSWER DOCUMENT, PAPER ACCOMMODATION, GR 04	scannable book, .166 (6x6 layout), 8.5x11, mark reflex, black plus one additional color, 60# offset, saddle-stitched, corner cut, matching lithocode	20	1	700
SOCIAL STUDIES ANSWER DOCUMENT, PAPER ACCOMMODATION, GR 07	scannable book, .166 (6x6 layout), 8.5x11, mark reflex, black plus one additional color, 60# offset, saddle-stitched, corner cut, matching lithocode	20	1	700
SOCIAL STUDIES ANSWER DOCUMENT, PAPER ACCOMMODATION, GR 11	scannable book, .166 (6x6 layout), 8.5x11, mark reflex, black plus one additional color, 60# offset, saddle-stitched, corner cut, matching lithocode	20	1	700
Scannable Headers				
DISTRICT/SCHOOL/GRADE/SUBJECT HEADER	scannable sheet, 166 (6x6 layout), 9.5x11, mark reflex, black plus one additional color, 60# offset, continuous, lithocode front/back	2	1	6,000
Non-scannable Test Books				

SCIENCE PAPER ACCOMMODATION TEST BOOKLET, GR 05	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints one GRAYSCALE plus black on cover, GRAYSCALE plus black all interior	64	1	700
SCIENCE PAPER ACCOMMODATION TEST BOOKLET, GR 08	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints one GRAYSCALE plus black on cover, GRAYSCALE plus black all interior	64	1	700
SCIENCE PAPER ACCOMMODATION TEST BOOKLET, GR 11	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints one GRAYSCALE plus black on cover, GRAYSCALE plus black all interior	64	1	700
SOCIAL STUDIES PAPER ACCOMMODATION TEST BOOKLET, GR 04	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints one GRAYSCALE plus black on cover, GRAYSCALE plus black all interior	64	8	700
SOCIAL STUDIES PAPER ACCOMMODATION TEST BOOKLET, GR 07	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints one GRAYSCALE plus black on cover, GRAYSCALE plus black all interior	64	8	700
SOCIAL STUDIES PAPER ACCOMMODATION TEST BOOKLET, GR 11	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints one GRAYSCALE plus black on cover, GRAYSCALE plus black all interior	64	8	700
Large Print				
SCIENCE LARGE PRINT TEST BOOKLET, GR 05	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints one GRAYSCALE plus black on cover, GRAYSCALE plus black all interior	64	1	35
SCIENCE LARGE PRINT TEST BOOKLET, GR 08	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints one GRAYSCALE plus black on cover, GRAYSCALE plus black all interior	64	1	35

SCIENCE LARGE PRINT TEST BOOKLET, GR 11	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints one GRAYSCALE plus black on cover, GRAYSCALE plus black all interior	64	1	35
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SOCIAL STUDIES LARGE PRINT TEST BOOKLET, GR 11	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints one GRAYSCALE plus black on cover, GRAYSCALE plus black all interior	64	1	35
Braille				
SCIENCE BRAILLE TEST BOOKLET, GR 05	Contracted Braille: 11-1/2x11" Manila 100# stock	160	1	6
SCIENCE BRAILLE TEST BOOKLET, GR 08	Contracted Braille: 11-1/2x11" Manila 100# stock	160	1	6
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SOCIAL STUDIES BRAILLE TEST BOOKLET, GR 07	Contracted Braille: 11-1/2x11" Manila 100# stock	160	1	6
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Non-Printed Non-Stock Materials				
TEACHER READ DIRECTIONS, SOCIAL STUDIES GRADE 04	Printable PDF, posted for Colorado teacher download.	8	1	PDF
TEACHER READ DIRECTIONS, SOCIAL STUDIES GRADE 07	Printable PDF, posted for Colorado teacher download.	8	1	PDF
TEACHER READ DIRECTIONS, SOCIAL STUDIES, GRADE 11	Printable PDF, posted for Colorado teacher download.	8	1	PDF

TEACHER READ DIRECTIONS, SCIENCE, GRADE 05	Printable PDF, posted for Colorado teacher download.	8	1	PDF
TEACHER READ DIRECTIONS, SCIENCE, GRADE 08	Printable PDF, posted for Colorado teacher download.	8	1	PDF
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DISTRICT AND SCHOOL COORDINATOR MANUAL FOR FIELD TEST	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints black on white	36	1	2,300
TEACHER/PROCTOR MANUAL FOR SCIENCE GRADE 05	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints black on white	24	1	4,400

TEACHER/PROCTOR MANUAL FOR SCIENCE GRADE 08	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints black on white	24	1	4,100
TEACHER/PROCTOR MANUAL FOR SOCIAL STUDIES GRADE 04	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints black on white	24	1	4,400
TEACHER/PROCTOR MANUAL FOR SOCIAL STUDIES GRADE 07	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints black on white	24	1	4,200
TEACHER/PROCTOR MANUAL FOR SCIENCE & SOCIAL STUDIES GRADE 11	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints black on white	24	1	8,000
Online Test Administrations				
SCIENCE ONLINE OPERATIONAL TEST GR 05	ONLINE TEST FORM	N/A	6	N/A
SCIENCE ONLINE OPERATIONAL TEST GR 08	ONLINE TEST FORM	N/A	6	N/A
SCIENCE ONLINE OPERATIONAL TEST GR 11	ONLINE TEST FORM	N/A	6	N/A
SOCIAL STUDIES ONLINE OPERATIONAL TEST GR 4	ONLINE TEST FORM	N/A	4	N/A
SOCIAL STUDIES ONLINE OPERATIONAL TEST GR 7	ONLINE TEST FORM	N/A	4	N/A
SOCIAL STUDIES ONLINE OPERATIONAL TEST GR11	ONLINE TEST FORM	N/A	4	N/A

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SOCIAL STUDIES PAPER ACCOMMODATION TEST BOOKLET, GR 07	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints one GRAYSCALE plus black on cover, GRAYSCALE plus black all interior	64	8	700
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SCIENCE LARGE PRINT TEST BOOKLET, GR 05	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints one GRAYSCALE plus black on cover, GRAYSCALE plus black all interior	64	1	35
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Braille (REPRINTS FROM SPRING 2015)				
SCIENCE BRAILLE TEST BOOKLET, GR 05	Contracted Braille: 11-1/2x11" Manila 100# stock	160	1	6
SCIENCE BRAILLE TEST BOOKLET, GR 08	Contracted Braille: 11-1/2x11" Manila 100# stock	160	1	6
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SOCIAL STUDIES BRAILLE TEST BOOKLET, GR 07	Contracted Braille: 11-1/2x11" Manila 100# stock	160	1	6
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Non-Printed Non-Stock Materials				
TEACHER READ DIRECTIONS, SOCIAL STUDIES GRADE 04	Printable PDF, posted for Colorado teacher download.	8	1	PDF
TEACHER READ DIRECTIONS, SOCIAL STUDIES GRADE 07	Printable PDF, posted for Colorado teacher download.	8	1	PDF
TEACHER READ DIRECTIONS, SOCIAL STUDIES, GRADE 11	Printable PDF, posted for Colorado teacher download.	8	1	PDF

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ORAL SCRIPTS, SPANISH, SOCIAL STUDIES, GRADE 07	Printable PDF, posted for Colorado teacher download.	8	1	PDF
ORAL SCRIPTS, SPANISH, SOCIAL STUDIES, GRADE 11	Printable PDF, posted for Colorado teacher download.	8	1	PDF
Other Non-Scannable Printed Materials (Manuals, etc.)				
DISTRICT AND SCHOOL COORDINATOR MANUAL FOR FIELD TEST	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints black on white	36	1	2,300
TEACHER/PROCTOR MANUAL FOR SCIENCE GRADE 05	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints black on white	24	1	4,400

TEACHER/PROCTOR MANUAL FOR SCIENCE GRADE 08	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints black on white	24	1	4,100
TEACHER/PROCTOR MANUAL FOR SOCIAL STUDIES GRADE 04	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints black on white	24	1	4,400
TEACHER/PROCTOR MANUAL FOR SOCIAL STUDIES GRADE 07	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints black on white	24	1	4,200
TEACHER/PROCTOR MANUAL FOR SCIENCE & SOCIAL STUDIES GRADE 11	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints black on white	24	1	8,000
Online Test Administrations				
SCIENCE ONLINE OPERATIONAL TEST GR 05	ONLINE TEST FORM	N/A	2	N/A
SCIENCE ONLINE OPERATIONAL TEST GR 08	ONLINE TEST FORM	N/A	2	N/A
SCIENCE ONLINE OPERATIONAL TEST GR 11	ONLINE TEST FORM	N/A	2	N/A
SOCIAL STUDIES ONLINE OPERATIONAL TEST GR 4	ONLINE TEST FORM	N/A	4	N/A
SOCIAL STUDIES ONLINE OPERATIONAL TEST GR 7	ONLINE TEST FORM	N/A	4	N/A
SOCIAL STUDIES ONLINE OPERATIONAL TEST GR11	ONLINE TEST FORM	N/A	4	N/A

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SOCIAL STUDIES ANSWER DOCUMENT, PAPER ACCOMMODATION, GR 04	scannable book, .166 (6x6 layout), 8.5x11, mark reflex, black plus one additional color, 60# offset, saddle-stitched, corner cut, matching lithocode	20	1	700
SOCIAL STUDIES ANSWER DOCUMENT, PAPER ACCOMMODATION, GR 07	scannable book, .166 (6x6 layout), 8.5x11, mark reflex, black plus one additional color, 60# offset, saddle-stitched, corner cut, matching lithocode	20	1	700
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TEACHER/PROCTOR MANUAL FOR SOCIAL STUDIES GRADE 04	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints black on white	24	1	4,400
TEACHER/PROCTOR MANUAL FOR SOCIAL STUDIES GRADE 07	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints black on white	24	1	4,200
TEACHER/PROCTOR MANUAL FOR SCIENCE & SOCIAL STUDIES GRADE 11	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints black on white	24	1	8,000
Online Test Administrations				
SCIENCE ONLINE OPERATIONAL TEST GR 05	ONLINE TEST FORM	N/A	2	N/A
SCIENCE ONLINE OPERATIONAL TEST GR 08	ONLINE TEST FORM	N/A	2	N/A
SCIENCE ONLINE OPERATIONAL TEST GR 11	ONLINE TEST FORM	N/A	2	N/A
SOCIAL STUDIES ONLINE OPERATIONAL TEST GR 4	ONLINE TEST FORM	N/A	4	N/A
SOCIAL STUDIES ONLINE OPERATIONAL TEST GR 7	ONLINE TEST FORM	N/A	4	N/A
SOCIAL STUDIES ONLINE OPERATIONAL TEST GR11	ONLINE TEST FORM	N/A	4	N/A

Document Title	Document Description	Estimated number of Pages	Estimated number of forms	Print Qty
Non-scannable Test Books/Scripts		528	12	2,000
SCIENCE TEST BOOK--FIELD TEST, GRADE 5	8-3/8X10-7/8 self cover booklet, tape bound, 50# white offset, prints blqck on white, all pages	88	2	350
SCIENCE TEST BOOK--FIELD TEST, GRADE 8	8-3/8X10-7/8 self cover booklet, tape bound, 50# white offset, prints blqck on white, all pages	88	2	350
SCIENCE TEST BOOK--FIELD TEST, HIGH SCHOOL	8-3/8X10-7/8 self cover booklet, tape bound, 50# white offset, prints blqck on white, all pages	88	2	300
SOCIAL STUDIES TEST BOOK--FIELD TEST, GRADE 4	8-3/8X10-7/8 self cover booklet, tape bound, 50# white offset, prints blqck on white, all pages	88	2	350
SOCIAL STUDIES TEST BOOK--FIELD TEST, GRADE 7	8-3/8X10-7/8 self cover booklet, tape bound, 50# white offset, prints blqck on white, all pages	88	2	350
SOCIAL STUDIES TEST BOOK--FIELD TEST, HIGH SCHOOL	8-3/8X10-7/8 self cover booklet, tape bound, 50# white offset, prints blqck on white, all pages	88	2	300
Other Non-Scannable Printed Materials (Manuals, etc.)		138	13	4,300
COORDINATOR MANUAL	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints black on white, all	18	1	2,300
TASK MANIPULATIVES--FIELD TEST, SCI, GRADE 5	Simplex print, black on white card stock. Ten card images, so 20 pages (then times two forms, of course)	20	2	350
TASK MANIPULATIVES--FIELD TEST, SCI, GRADE 8	Simplex print, black on white card stock. Ten card images, so 20 pages (then times two forms, of course)	20	2	350
TASK MANIPULATIVES--FIELD TEST, SCI, HIGH SCHOOL	Simplex print, black on white card stock. Ten card images, so 20 pages (then times two forms, of course)	20	2	300
TASK MANIPULATIVES--FIELD TEST, SS, GRADE 4	Simplex print, black on white card stock. Ten card images, so 20 pages (then times two forms, of course)	20	2	350

Document Title	Document Description	Estimated number of Pages	Estimated number of forms	Print Qty
TASK MANIPULATIVES----FIELD TEST, SS, GR 7	Simplex print, black on white card stock. Ten card images, so 20 pages (then times two forms, of course)	20	2	350
TASK MANIPULATIVES--FIELD TEST, SS, HIGH SCHOOL	Simplex print, black on white card stock. Ten card images, so 20 pages (then times two forms, of course)	20	2	300
MEMO	Simplex print, black on white paper.	2		2,300
CERTIFICATION FORM	Simplex print, black on white paper.	1		2,300
Non-Printed Non-Stock Materials (CD, Etc.): Not Used		-	-	-
EXAMINER'S MANUAL	PDF	16	1	
Miscellaneous Materials (Stock)		5	1	-
LABELS, SECURITY LISTS, PACKAGING LISTS, ETC.	Stock items	5	1	-
SECURE RETURN ENVELOPE	stock item, sec.	n/a	1	

Document Title	Document Description	Estimated number of Pages	Estimated number of forms	Print Qty
Non-scannable Test Books/Scripts		528	10	3,200
SCIENCE TEST BOOK--OPERATIONAL TEST, GRADE 5	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints blqck on white, all pages	88	2	640
SCIENCE TEST BOOK--OPERATIONAL TEST, GRADE 8	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints blqck on white, all pages	88	2	640
SOCIAL STUDIES TEST BOOK--OPERATIONAL TEST, GRADE 7	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints blqck on white, all pages	88	2	640
SOCIAL STUDIES TEST BOOK--OPERATIONAL TEST, GRADE 5	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints blqck on white, all pages	88	2	640
SCIENCE AND SOCIAL STUDIES TEST BOOK--OPERATIONAL TEST, HIGH SCHOOL	8-3/8X10-7/8 booklet, perfect bound, prints black on 50# white offset all interior	176	2	640
Other Non-Scannable Printed Materials (Manuals, etc.)		148	11	5,500
COORDINATOR MANUAL	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints one color plus black on cover, one color plus black all interior	28	1	2,300
SCIENCE STUDENT MATERIALS--OPERATIONAL TEST, GRADE 5	Simplex print, black on white card stock.	20	2	640
SCIENCE STUDENT MATERIALS--OPERATIONAL TEST, GRADE 8	Simplex print, black on white card stock.	20	2	640
SOCIAL STUDIES STUDENT MATERIALS--OPERATIONAL TEST, GRADE 4	Simplex print, black on white card stock.	20	2	640
SOCIAL STUDIES STUDENT MATERIALS--OPERATIONAL TEST, GRADE 7	Simplex print, black on white card stock.	20	2	640
SCIENCE AND SOCIAL STUDIES STUDENT MATERIALS--OPERATIONAL TEST, HIGH SCHOOL	Simplex print, black on white card stock.	40	2	640
MEMO	Simplex print, black on white paper.	2		2,300

Document Title	Document Description	Estimated number of Pages	Estimated number of forms	Print Qty
INTERPRETIVE GUIDE	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints one color plus black on cover, one color plus black all interior			5,500
Non-Printed Non-Stock Materials (CD, Etc.): Not Used		-	-	-
EXAMINER'S MANUAL	PDF	15		
Miscellaneous Materials (Stock)		5	1	-
LABELS, SECURITY LISTS, PACKAGING LISTS, ETC.	Stock items	5	1	-
SECURE RETURN ENVELOPE	stock item, sec.	n/a	1	2,800

Document Title	Document Description	Estimated number of Pages	Estimated number of forms	Print Qty
Non-scannable Test Books/Scripts		528	10	3,200
SCIENCE TEST BOOK--OPERATIONAL TEST, GRADE 5	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints blqck on white, all pages	88	2	640
SCIENCE TEST BOOK--OPERATIONAL TEST, GRADE 8	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints blqck on white, all pages	88	2	640
SOCIAL STUDIES TEST BOOK--OPERATIONAL TEST, GRADE 7	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints blqck on white, all pages	88	2	640
SOCIAL STUDIES TEST BOOK--OPERATIONAL TEST, GRADE 5	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints blqck on white, all pages	88	2	640
SCIENCE AND SOCIAL STUDIES TEST BOOK--OPERATIONAL TEST, HIGH SCHOOL	8-3/8X10-7/8 booklet, perfect bound, prints black on 50# white offset all interior	176	2	640
Other Non-Scannable Printed Materials (Manuals, etc.)		148	11	5,500
COORDINATOR MANUAL	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints one color plus black on cover, one color plus black all interior	28	1	2,300
SCIENCE STUDENT MATERIALS--OPERATIONAL TEST, GRADE 5	Simplex print, black on white card stock.	20	2	640
SCIENCE STUDENT MATERIALS--OPERATIONAL TEST, GRADE 8	Simplex print, black on white card stock.	20	2	640
SOCIAL STUDIES STUDENT MATERIALS--OPERATIONAL TEST, GRADE 4	Simplex print, black on white card stock.	20	2	640
SOCIAL STUDIES STUDENT MATERIALS--OPERATIONAL TEST, GRADE 7	Simplex print, black on white card stock.	20	2	640
SCIENCE AND SOCIAL STUDIES STUDENT MATERIALS--OPERATIONAL TEST, HIGH SCHOOL	Simplex print, black on white card stock.	40	2	640

MEMO	Simplex print, black on white paper.	2		2,300
INTERPRETIVE GUIDE	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints one color plus black on cover, one color plus black all interior			5,500
Non-Printed Non-Stock Materials (CD, Etc.): Not Used		-	-	-
EXAMINER'S MANUAL	PDF	15		
Miscellaneous Materials (Stock)		5	1	-
LABELS, SECURITY LISTS, PACKAGING LISTS, ETC.	Stock items	5	1	-
SECURE RETURN ENVELOPE	stock item, sec.	n/a	1	2,800

Document Title	Document Description	Estimated number of Pages	Estimated number of forms	Print Qty
Non-scannable Test Books/Scripts		528	10	3,200
SCIENCE TEST BOOK--OPERATIONAL TEST, GRADE 5	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints blqck on white, all pages	88	2	640
SCIENCE TEST BOOK--OPERATIONAL TEST, GRADE 8	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints blqck on white, all pages	88	2	640
SOCIAL STUDIES TEST BOOK--OPERATIONAL TEST, GRADE 7	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints blqck on white, all pages	88	2	640
SOCIAL STUDIES TEST BOOK--OPERATIONAL TEST, GRADE 5	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints blqck on white, all pages	88	2	640
SCIENCE AND SOCIAL STUDIES TEST BOOK--OPERATIONAL TEST, HIGH SCHOOL	8-3/8X10-7/8 booklet, perfect bound, prints black on 50# white offset all interior	176	2	640
Other Non-Scannable Printed Materials (Manuals, etc.)		148	11	5,500
COORDINATOR MANUAL	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints one color plus black on cover, one color plus black all interior	28	1	2,300
SCIENCE STUDENT MATERIALS--OPERATIONAL TEST, GRADE 5	Simplex print, black on white card stock.	20	2	640
SCIENCE STUDENT MATERIALS--OPERATIONAL TEST, GRADE 8	Simplex print, black on white card stock.	20	2	640
SOCIAL STUDIES STUDENT MATERIALS--OPERATIONAL TEST, GRADE 4	Simplex print, black on white card stock.	20	2	640
SOCIAL STUDIES STUDENT MATERIALS--OPERATIONAL TEST, GRADE 7	Simplex print, black on white card stock.	20	2	640
SCIENCE AND SOCIAL STUDIES STUDENT MATERIALS--OPERATIONAL TEST, HIGH SCHOOL	Simplex print, black on white card stock.	40	2	640

MEMO	Simplex print, black on white paper.	2		2,300
INTERPRETIVE GUIDE	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints one color plus black on cover, one color plus black all interior			5,500
Non-Printed Non-Stock Materials (CD, Etc.): Not Used		-	-	-
EXAMINER'S MANUAL	PDF	15		
Miscellaneous Materials (Stock)		5	1	-
LABELS, SECURITY LISTS, PACKAGING LISTS, ETC.	Stock items	5	1	-
SECURE RETURN ENVELOPE	stock item, sec.	n/a	1	2,800

Document Title	Document Description	Estimated number of Pages	Estimated number of forms	Print Qty
Non-scannable Test Books/Scripts		528	10	3,200
SCIENCE TEST BOOK--OPERATIONAL TEST, GRADE 5	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints blqck on white, all pages	88	2	640
SCIENCE TEST BOOK--OPERATIONAL TEST, GRADE 8	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints blqck on white, all pages	88	2	640
SOCIAL STUDIES TEST BOOK--OPERATIONAL TEST, GRADE 7	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints blqck on white, all pages	88	2	640
SOCIAL STUDIES TEST BOOK--OPERATIONAL TEST, GRADE 5	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints blqck on white, all pages	88	2	640
SCIENCE AND SOCIAL STUDIES TEST BOOK--OPERATIONAL TEST, HIGH SCHOOL	8-3/8X10-7/8 booklet, perfect bound, prints black on 50# white offset all interior	176	2	640
Other Non-Scannable Printed Materials (Manuals, etc.)		148	11	5,500
COORDINATOR MANUAL	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints one color plus black on cover, one color plus black all interior	28	1	2,300
SCIENCE STUDENT MATERIALS--OPERATIONAL TEST, GRADE 5	Simplex print, black on white card stock.	20	2	640
SCIENCE STUDENT MATERIALS--OPERATIONAL TEST, GRADE 8	Simplex print, black on white card stock.	20	2	640
SOCIAL STUDIES STUDENT MATERIALS--OPERATIONAL TEST, GRADE 4	Simplex print, black on white card stock.	20	2	640
SOCIAL STUDIES STUDENT MATERIALS--OPERATIONAL TEST, GRADE 7	Simplex print, black on white card stock.	20	2	640
SCIENCE AND SOCIAL STUDIES STUDENT MATERIALS--OPERATIONAL TEST, HIGH SCHOOL	Simplex print, black on white card stock.	40	2	640

MEMO	Simplex print, black on white paper.	2		2,300
INTERPRETIVE GUIDE	8-3/8X10-7/8 self cover booklet, saddle stitched, 50# white offset, prints one color plus black on cover, one color plus black all interior			5,500
Non-Printed Non-Stock Materials (CD, Etc.): Not Used		-	-	-
EXAMINER'S MANUAL	PDF	15		
Miscellaneous Materials (Stock)		5	1	-
LABELS, SECURITY LISTS, PACKAGING LISTS, ETC.	Stock items	5	1	-
SECURE RETURN ENVELOPE	stock item, sec.	n/a	1	2,800

Exhibit E: Payment Schedule

Payment Schedule for Contract Period December 21, 2012 through August 30, 2014

	INVOICE DATE	INVOICE AMOUNT	Completed Associated Tasks and Services	
Payment 1	March 15, 2013	**$2,547,586.00**	Content Development (Items Round 1 and Form Development)	$1,456,302.50
			Ancillary Development	$69,565.00
			Program Management	$552,085.50
			Quality Assurance	$49,692.50
			Travel and Meetings (planning meetings, item development, bias review, administration training, scorer training, technology coordinator training, site readiness training, district assessment coordinator management meeting)	$419,940.00
Payment 2	June 15, 2013	**$4,718,068.00**	Content Development (Items Round 2)	$1,456,302.50
			Program Management	$552,085.50
			Information Technology	$218,556.00
			Psychometrics	$343,377.00
			Quality Assurance	$49,692.50
			Test Delivery System	$497,197.00
			Production/Manufacturing/Distribution	$249,544.00
			Receiving/Scanning/Editing	$2,394.00
			Reporting	$519,537.00
			Scoring	$689,402.00
			Travel and Meetings (planning meetings, item development, range finding, data review, item review, materials management training, cognitive labs)	$139,980.00
TOTAL FOR FY2013		**$7,265,653.00**		
Payment 3	September 15, 2013	**$1,226,488.91**	Content Development (Items Round 3)	$686,431.80
			Program Management (1/4)	$301,604,50
			Quality Assurance (3/14)	$29,491.50
			Travel and Meetings (planning meetings, item review, bias review, data review, stimuli and storyboard review)	$208,961.11
Payment 4	December 15, 2013	**$1,096,564.59**	Content Development (Form Development)	$152,540.40
			Program Management	$301,604.50
			Psychometrics	$107,072.00
			Quality Assurance	$29,491.50
			Test Delivery System	$211,051.00
			Reporting	$211,220.75
			Travel and Meetings (planning meetings, anchor validation)	$83,584.44
Payment 5	March 15, 2014	**$1,337,223.28**	Content Development (Items Round 4)	$305,080.80

			Ancillary Development Program Management Quality Assurance Production/Manufacturing/Distribution (test materials) Reporting Travel and meetings (planning meetings, item development, stimuli and storyboard review, administration training, technology coordinator training, district assessment coordinator management meeting)	$141,466.00 $301,604.50 $29,491.50 $139,850.55 $168,976.60 $250,753.33
Payment 6	June 15, 2014	**$3,996,071.41**	Content Development (Items Round 4) Program Management Information Technology Psychometrics Quality Assurance Test Delivery System Production/Manufacturing/Distribution (test materials) Receiving/Scanning/Editing Reporting Scoring Travel and meetings (planning, item development, rangefinding, standard setting, understanding assessment results training)	$381,351.00 $301,604.50 $299,604.00 $214,144.00 $29,491.50 $211,051.00 $139,850.55 $12,828.00 $211,220.75 $1,985,965.00 $208,961.11
TOTAL FOR FY2014		**$7,656,348.20**		
Payment 7	August 15, 2014		Psychometrics Quality Assurance Production/Manufacturing/Distribution (reports) Reporting	$107,072.00 $19,661.00 $31,077.90 $253,464.90
TOTAL FOR FY 2015		**$411,275.80**		
TOTAL FOR July 1, 2013-August 30, 2014		**$8,067,624.00**		
TOTAL FOR Initial Contract Period		**$15,333,277.00**		

Exhibit F: Colorado - Summative & Alternate Assessment Pricing Data

	Total Price							
	Initial Development - May 1, 2012 - June 30, 2013	Ongoing Administration				July 1, 2017 - December 31, 2017		
	New Assessment Development	Year 1 - July 1, 2013 - August 30, 2014	Year 2 - July 1, 2014 - June 30, 2015	Year 3 - July 1, 2015 - June 30, 2016	Year 4 - July 1, 2016 - June 30, 2017	Transition Activities - Final Year Closeout	Total Costs	Explanatory Notes
Content Development	**$2,912,605**	**$1,525,404**	**$1,175,955**	**$1,056,205**	**$1,042,904**	**$134,480**	**$7,847,553**	
Summative	$1,983,746	$1,338,395	$1,101,440	$975,664	$959,461	$134,480	$6,493,186	
Alternate (Science & Social Studies Only)	$928,859	$187,009	$74,515	$80,541	$83,443	$0	$1,354,367	
Ancillary Development	**$69,565**	**$141,466**	**$127,138**	**$113,548**	**$111,933**	**$0**	**$563,650**	
Summative	$60,494	$137,322	$122,382	$108,407	$106,607	$0	$535,212	
Alternate (Science & Social Studies Only)	$9,071	$4,144	$4,756	$5,141	$5,326	$0	$28,438	
Program Management	**$1,104,171**	**$1,206,418**	**$1,227,831**	**$1,082,848**	**$926,594**	**$145,329**	**$5,693,191**	
Summative	$797,873	$780,270	$780,373	$602,903	$580,322	$78,661	$3,620,402	
Alternate (Science & Social Studies Only)	$306,298	$426,148	$447,458	$479,945	$346,272	$66,668	$2,072,789	
Information Technology	**$218,556**	**$299,604**	**$322,789**	**$228,346**	**$236,498**	**$0**	**$1,305,793**	
Summative	$57,820	$55,300	$48,959	$47,274	$37,491	$0	$246,844	
Alternate (Science & Social Studies Only)	$160,736	$244,304	$273,830	$181,072	$199,007	$0	$1,058,949	All Technology efficiencies for having both the Summative and ALT programs have been applied to ALT
Psychometrics	**$343,377**	**$428,288**	**$292,128**	**$257,711**	**$233,544**	**$125,157**	**$1,680,205**	
Summative	$175,019	$181,398	$182,385	$161,076	$144,675	$68,842	$913,395	
Alternate (Science & Social Studies Only)	$168,358	$246,890	$109,743	$96,635	$88,869	$56,315	$766,810	
Quality Assurance	**$99,385**	**$137,627**	**$155,291**	**$139,861**	**$131,423**	**$0**	**$663,587**	
Summative	$69,947	$91,182	$102,522	$93,024	$91,067	$0	$447,742	
Alternate (Science & Social Studies Only)	$29,438	$46,445	$52,769	$46,837	$40,356	$0	$215,845	
Test Delivery System	**$497,197**	**$422,102**	**$470,241**	**$453,336**	**$434,878**	**$0**	**$2,277,754**	
Summative	$332,180	$314,303	$338,809	$348,264	$319,405	$0	$1,652,961	
Alternate (Science & Social Studies Only)	$165,017	$107,799	$131,432	$105,072	$115,473	$0	$624,793	
Production_Mfg_Dist	**$249,544**	**$310,779**	**$318,496**	**$276,182**	**$269,353**	**$0**	**$1,424,354**	
Summative	$145,531	$199,359	$214,365	$179,089	$171,075	$0	$909,419	
Alternate (Science & Social Studies Only)	$104,013	$111,420	$104,131	$97,093	$98,278	$0	$514,935	
Receiving/Scanning/Editing	**$2,394**	**$12,828**	**$13,645**	**$14,547**	**$15,006**	**$0**	**$58,420**	
Summative	$0	$10,155	$11,935	$12,697	$13,248	$0	$48,035	
Alternate (Science & Social Studies Only)	$2,394	$2,673	$1,710	$1,850	$1,758	$0	$10,385	
Reporting	**$519,537**	**$844,883**	**$593,517**	**$567,100**	**$549,395**	**$0**	**$3,074,432**	
Summative	$514,454	$658,199	$421,258	$429,966	$396,896	$0	$2,420,773	
Alternate (Science & Social Studies Only)	$5,083	$186,684	$172,259	$137,134	$152,499	$0	$653,659	
Scoring	**$689,402**	**$1,985,965**	**$2,065,405**	**$1,951,659**	**$1,941,174**	**$0**	**$8,633,605**	
Summative	$689,402	$1,985,965	$2,065,405	$1,951,659	$1,941,174	$0	$8,633,605	
Alternate (Science & Social Studies Only)	$0	$0	$0	$0	$0	$0	$0	
Travel and Meetings	**$559,920**	**$752,260**	**$559,345**	**$649,617**	**$603,905**	**$69,483**	**$3,194,530**	
Summative	$321,083	$348,575	$232,574	$294,649	$256,356	$37,196	$1,490,433	
Alternate (Science & Social Studies Only)	$238,837	$403,685	$326,771	$354,968	$347,549	$32,287	$1,704,097	
Grand Total - Summative	**$5,147,549**	**$6,100,423**	**$5,622,407**	**$5,204,672**	**$5,017,777**	**$319,179**	**$27,412,007**	
Grand Total - Alternate (Science & Social Studies Only)	**$2,118,104**	**$1,967,201**	**$1,699,374**	**$1,586,288**	**$1,478,830**	**$155,270**	**$9,005,067**	All Technology efficiencies for having both the Summative and ALT programs have been applied to ALT
Grand Total - Summative & Alternate Assessment	**$7,265,653**	**$8,067,624**	**$7,321,781**	**$6,790,960**	**$6,496,607**	**$474,449**	**$36,417,074**	

Grand total should be equal to vendor's total contract price to the customer, excluding options or alternatives