

IN THE COMMONWEALTH COURT OF PENNSYLVANIA

WILLIAM PENN SCHOOL DISTRICT,
et al.,

Petitioners

v.

PENNSYLVANIA DEPARTMENT OF
EDUCATION, *et al.*,

Respondents

NO. 587 MD 2014

**LEGISLATIVE RESPONDENTS' PROPOSED FINDINGS OF FACT AND
CONCLUSIONS OF LAW**

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Speaker of the House Bryan Cutler and President *pro Tempore* of the Senate Jake Corman, in their official capacities ("Legislative Respondents"), by and through their undersigned counsel, respectfully submit the following Proposed Findings of Fact and Conclusions of Law.¹

I. PROCEDURAL HISTORY

A. The Parties and The Action

1. Petitioners are a collection of Pennsylvania school districts, parents, students/former students and organizations who have asserted a constitutional challenge to the Commonwealth's system for funding public K-12 education.

2. Petitioners instituted this lawsuit in this Court's original jurisdiction via Petition for Review ("Petition") filed on November 10, 2014. The Petition asserts two causes of action: (1) for violation of the Education Clause of Pennsylvania's Constitution, Article III, § 14 ("Education Clause"); and (2) for violation of the Equal Protection Clause of Pennsylvania's Constitution, Article II, § 32 ("Equal Protection Clause").

¹ Because this case involves provisions of the Pennsylvania Constitution and their history, along with statutory law, administrative regulations, the powers and duties of agencies and officials, and the effects of these authorities on petitioners, these proposed Findings of Fact contain a mix of statements of fact and law, to provide context for each item in a readable sequence.

3. The Petition seeks various forms of declaratory and injunctive relief, including but not limited to a declaration that the current school funding system is unconstitutional and a permanent injunction requiring the development of a new school funding arrangement. [Petition, ¶¶ 312-321].

4. Petitioner Greater Johnstown School District (“Greater Johnstown”) is a school district located in Cambria County. [November 1, 2021 Joint Stipulation of Facts (“Stip. of Facts”), § 6].

5. Petitioner School District of Lancaster (“Lancaster”) is a school district located in Lancaster County. [Stip. of Facts, § 7].

6. Petitioner Panther Valley School District (“Panther Valley”) is a school district serving parts of Schuylkill and Carbon Counties. [Stip. of Facts, § 8].

7. Petitioner Shenandoah Valley School District (“Shenandoah Valley”) is a school district located in Schuylkill County. [Stip. of Facts, § 9].

8. Petitioner Wilkes-Barre Area School District (“Wilkes-Barre”) is a school district located in Luzerne County. [Stip. of Facts, § 10].

9. Petitioner William Penn School District (“William Penn”) is a school district located in Delaware County. [Stip. of Facts, § 11].

10. In this document, Petitioners Greater Johnstown, Lancaster, Panther Valley, Shenandoah Valley, Wilkes-Barre and William Penn will be collectively referred to as “Petitioner Districts.”

11. Petitioners Bryant and Jamella Miller are residents of William Penn and the parents of Petitioner K. M., who was 18 years old as of the Parties’ Joint Stipulation of Facts on

November 1, 2021. K. M. formerly attended William Penn district schools and is a 2021 graduate of the Pennsylvania Leadership Charter School (“PALCS”). [Stip. of Facts, § 12].

12. Petitioner Sheila Armstrong is a resident of the School District of Philadelphia (“Philadelphia” or “SDP”) and the mother of Petitioner S. A., who is a 2020 graduate of Mastbaum High School in SDP. [Stip. of Facts, § 13].

13. Petitioner Tracey Hughes is a Wilkes-Barre resident and the mother of Petitioner, Michael Horvath (identified in the Petition as P.M.H.), a 2019 graduate of Elmer L. Meyers High School in Wilkes-Barre. [Stip. of Facts, § 14].

14. Petitioner Pennsylvania Association of Rural and Small Schools (“PARSS”) is a statewide membership organization composed of approximately 178 second-, third-, and fourth-class public school districts and 18 Intermediate Units (“IUs”) in Pennsylvania. PARSS is described as an advocacy and service organization dedicated to ensuring that the Commonwealth’s rural school students have access to a quality education. [Stip. of Facts, § 15].

15. Petitioner NAACP Pennsylvania State Conference (“NAACP-PA”) is a non-profit organization operating in Pennsylvania and is affiliated with the National Association for the Advancement of Colored People, described as the nation’s oldest and largest nonpartisan civil rights organization. A primary purpose of the NAACP-PA is to improve the political, education, social, and economic status of African-Americans and other racial and ethnic minorities. [Stip. of Facts, § 16].

16. Respondent Pennsylvania Department of Education (“PDE”) is empowered by statute to “administer all of the laws of this Commonwealth with regard to the establishment, maintenance, and conduct of the public schools[.]” 71 P.S. § 352(a). It oversees all public school districts, IUs, charter schools, cyber charter schools, career technology centers and vocational

technical schools, among other components of Pennsylvania’s system of public education. [Stip. of Facts, § 17].

17. Respondent Governor Thomas Wolf is the current Governor of the Commonwealth of Pennsylvania. Governor Wolf is named in this lawsuit in his official capacity. [Stip. of Facts, § 18].

18. As of April 28, 2022, Respondent Noe Ortega was Pennsylvania’s acting Secretary of Education. Secretary Ortega is named in this lawsuit in his official capacity.² [Stip. of Facts, § 19; *see also* Section 201 of Administrative Code of 1929].

19. Respondent State Board of Education (“State Board”) is an administrative board placed within the Department of Education by Section 202 of the Administrative Code of 1929. The Board has the powers and duties delegated to it by Article XXVI-B of the Public School Code of 1949, Act of March 10, 1949, P.L. 30, No. 14, 24 P.S. § 1-101 et seq., as amended (“School Code”). [24 P.S. §§ 2601B through 2606-B].

20. Respondent Speaker Bryan Cutler is the current Speaker of the Pennsylvania House of Representatives. Speaker Cutler is named in this lawsuit in his official capacity. [Stip. of Facts, § 20].

21. Respondent Senator Jake Corman is the current President *pro Tempore* of the Pennsylvania Senate. Senator Corman is named in this lawsuit in his official capacity. [Stip. of Facts, § 21].

22. Governor Wolf, Secretary Ortega, Speaker Cutler and Senator Corman have all been substituted in this action in the place of their respective predecessors in office, in accordance with Pa. R.A.P. 502(c). [Stip. of Facts, § 22].

² Governor Wolf, Secretary Ortega and PDE are collectively referred to as “Executive Respondents”.

23. No legislative bodies or officials are identified as parties to this case other than Speaker Cutler and Senator Corman, in their official capacities as presiding officers of the two chambers of the Pennsylvania General Assembly. Specifically, the Pennsylvania House of Representatives, the Pennsylvania Senate, and the Pennsylvania General Assembly have not been named as parties and have not entered appearances in this case.

B. Prior Proceedings

24. Legislative Respondents and Executive Respondents each filed Preliminary Objections to the Petition in the nature of a demurrer pursuant to Pa. R.C.P. 1028(a)(4) asserting that Petitioners' claims present non-justiciable political questions.

25. In a unanimous, published decision, this Court sustained Respondents' Preliminary Objections and dismissed the Petition on the grounds that, pursuant to Supreme Court precedent, both the Education Clause claims and the Equal Protection Clause claims entail non-justiciable political questions. [*See William Penn Sch. Dist. v. PA Dept. of Educ.*, 114 A.3d 546, 464 & N. 15 (Pa. Cmwlth. 2015) (*en banc*) (“*William Penn I*”)].

26. On September 28, 2017, the Supreme Court reversed and remanded, finding that this Court erred in determining Petitioners' claims to be non-justiciable. [*William Penn Sch. Dist. v. PA Dept. of Educ.*, 170 A.3d 414, 463-64 (Pa. 2017) (“*William Penn II*”)].

27. In remanding the matter to this Court, the Supreme Court noted that its determination that this case must be determined on the merits “does not suggest that Petitioners' claims, or those of any future litigant, should or will prevail.... We hold merely that Petitioners' claims cannot be dismissed as non-justiciable.” 170 A.3d at 457. See also *id.* at 455 (“that a case is entertained on the merits hardly guarantees victory for either side.”)

C. Trial

28. Upon remand, and following discovery and pretrial motions, this Court sitting in its original jurisdiction conducted trial from November 12, 2021 through February 22, 2022, with closing arguments heard on March 10, 2022.

29. During the trial, the Court received testimony from 45 witnesses. Forty of these witnesses testified live (in-person or via WebEx) and five were presented by way of deposition.

30. Of these witnesses, Petitioners offered the testimony of 31 witnesses, including six expert witnesses. Legislative Respondents introduced the testimony of 13 witnesses, including five expert witnesses and four representatives of Petitioners, who were not called by Petitioners and were introduced by way of deposition designations pursuant to Pa. R.C.P. 4040(a)(2). Executive Respondents introduced the testimony of one witness.

31. In addition to the witness testimony, the parties collectively introduced approximately 1,600 exhibits that were admitted into evidence.

II. RELEVANT CONSTITUTIONAL LANGUAGE AND HISTORY

A. Education Clause

32. Article III, Section 14 of the Pennsylvania Constitution states that “the General Assembly shall provide for the maintenance and support of a thorough and efficient system of public education to serve the needs of the Commonwealth.”

33. The Education Clause was presented for adoption to the voters of Pennsylvania in the primary election held on May 16, 1967. [See P.L.1037, J.R.3 (May 16, 1967)].

34. The Education Clause was adopted by the voters on that date. [See Laws of Pennsylvania, Session of 1967, P.L. 1069, Proclamation of the Governor (proclaiming the adoption of constitutional amendments by the electorate)].

35. In the same primary election, the voters also authorized a constitutional convention, which resulted in the Constitution of 1968. The convention made substantive amendments and reorganized the constitutional structure. However, it did not impact the Education Clause in any way.

36. The records of the 1968 Constitutional Convention do not discuss the Education Clause.

37. The Education Clause adopted in 1967 replaced a previous clause that had been in effect from 1874 until 1967, which stated:

The General Assembly shall provide for the maintenance and support of a thorough and efficient system of public schools, wherein all the children of this Commonwealth above the age of six years may be educated, and shall appropriate at least one million dollars each year for that purpose.

[Constitution of 1874, Article X, section 1].

38. The text of the 1967 Education Clause differs significantly from the earlier clause, as follows:

a. It does not refer to a system of “public schools.” Instead, it refers to a system of “public education.”

b. It contains no reference to the children of the Commonwealth, nor to their education. The language of the former clause, “wherein all the children of this Commonwealth above the age of six years may be educated,” does not appear.

c. The language of the former clause, “and shall appropriate at least one million dollars each year for that purpose,” does not appear.

d. The 1967 Education Clause contains a statement of purpose, *i.e.*, “to serve the needs of the Commonwealth.” The former clause contained no statement of purpose.

e. In the 1967 referendum, the Education Clause was moved from Article X to Article III, which addresses Legislation.

39. A comparison of the 1874 Education Clause to the current Article III, Section 14 reveals the following changes (additions in blue, deletions in red): “The General Assembly shall provide for the maintenance and support of a thorough and efficient system of public education schools, ~~wherein all the children of this Commonwealth above the age of six years may be educated, and shall appropriate at least one million dollars each year for that purpose~~ to serve the needs of the Commonwealth.”

40. As per the Constitution, the purpose of public education in Pennsylvania is “to serve the needs of the Commonwealth.” [Pa. Const., art. III, § 14]

41. The history surrounding what became the Education Clause was discussed extensively by the Supreme Court in its opinion in *William Penn II*. The Supreme Court’s discussion relied heavily on the “exemplary” unpublished single-judge opinion of Judge Pellegrini in *Pennsylvania Association of Rural & Small Schools v. Ridge*, 11 M.D. 1991, slip op. at 86-105 (Cmwlth. Ct. July 9, 1998) (hereinafter *PARSS*), *aff’d* 737 A.2d 246 (Pa. 1999). See *William Penn II*, 170 A.3d at 419-423 & n.6.

42. Additionally, at trial, Petitioners presented the testimony of Derek Black, a professor of law at the University of South Carolina Law School, to discuss the history of the former version of the Education Clause and the Pennsylvania Constitutional Convention held in 1872 and 1873 (“1873 Convention”). [11/17/21 N.T. at 904 (Black)].

43. Professor Black believed that the current version of the Education Clause had been adopted at the 1968 Constitutional Convention. [11/17/21 N.T. at 936 (Black)]. This belief was incorrect because, as noted, the Education Clause was adopted by the voters of

Pennsylvania on May 16, 1967 – about six months prior to when the 1968 Constitutional Convention took place.

44. Professor Black acknowledged that he had never researched what voters on May 16, 1967 believed the phrases “thorough and efficient” “to serve the needs of the Commonwealth,” to mean. [11/18/21 N.T. at 1077 (Black)].

45. As explained by the Supreme Court in *William Penn II*, education has been referenced in Pennsylvania’s foundational documents as far back as William Penn’s 1682 Frame of Government of Pennsylvania, which was Pennsylvania’s first charter and was “in effect a constitution agreed upon between Penn and the colonists.” [*William Penn II*, 170 A.3d at 418 (quoting John L. Gedid, *History of the Pennsylvania Constitution*, in *The Pennsylvania Constitution: A Treatise on Rights and Liberties* 31-72 (Ken Gormley, et al., eds. 2004))]. Education was also included in the Pennsylvania Constitutions of 1776 and 1790. [*William Penn II*, 170 A.3d at 420].

46. These earlier constitutional provisions and related statutes focused only on the education of the poor. For instance, the laws effectuating the 1790 Education Clause merely allowed parents who declared themselves “paupers” to receive state aid and to pay tuition at private institutions. [*William Penn II*, 170 A.3d at 420]. Pennsylvania’s 1838 Constitution adjusted the structure of government, providing refinements in the protection of rights and the imposition of additional limitations on legislative power. However, the Education Clause initially adopted in the 1790 Constitution “remained unchanged.” [*Id.* at 422].

47. The “pauper school” approach “reached few children and as late as 1828, the State had paid the tuition of only 4,477 children that year.” [*William Penn II*, 170 A.3d at 420 (citing Elwood P. Cubberley, *Public Education in the United States*, 192 (2d Ed. 1934))]. Because

of these limitations, during that period, ***over half of the Commonwealth’s 400,000 children were not enrolled in school.*** [William Penn II, 170 A.3d at 419-420 (citing Stuart G. Noble, A History of American Education, 160 (1938))].

48. In the 1850s and the decades that followed, education reformers in many states including Pennsylvania “led movements advocating universally funded public education.” [William Penn II, 170 A.3d at 423]. Many states strengthened their commitment to education through constitutional education clauses or new legislation. However, “Pennsylvania did not revisit the Education Clause until the 1873 constitutional convention, when the drafters eliminated the prior clause’s focus upon instruction for the poor.” [Id].

49. Professor Black agreed that the constitutional references to education that existed prior to the 1874 Constitution only spoke to education for the poor and did not ensure that all children, including poor and wealthy, rural and urban, had access to public education. [11/18/21 N.T. at 1027 (Black)].

50. Specifically, prior to the 1873 Convention, public schooling had failed to gain traction in poor and more remote areas of Pennsylvania and a significant portion of rural Pennsylvania did not have any schools at all. [11/18/21 N.T. at 1027-1028 (Black)].

51. The principal impetus for the Convention of 1873 was the desire of the voters to address political corruption and abuses. [See Hellerich, *Public Education and the Pennsylvania Constitutional Convention of 1873*, History of Education Journal (Autumn, 1957, Vol. 9, No. 1, pp. 1-7)]. “Public education was a matter of secondary importance to the Pennsylvania constitutional convention of 1873.” [Id. at p.1]. “Regulation of railroads, elimination of legislative corruption, protection of the ballot against the fraudulent activities of the big city political machine – these were the great and over-riding problems which had led the voters . . . to

call a constitutional convention . . . and which absorbed the time and interest of the delegates . . .” [Id.; see also Klein and Hoogenboom, *A History of Pennsylvania* (McGraw-Hill, 1973), p. 318-321].

52. “The constitutional convention was in session for 180 days spread from November 12, 1872 to December 27, 1873.” [Klein and Hoogenboom at 319]. “The Convention devoted five days to the fashioning of the education article.” [Hellerich, p. 4].

53. The record of the Convention is contained in eight volumes of text, consisting of roughly 6,400 pages. [11/17/21 N.T. at 1005 (Black); see also Duquesne University School of Law, PA Constitution, Historical Research: <https://www.paconstitution.org/historical-research/constitutional-convention-1873/>].

54. The language that provided the genesis for a portion of today’s Education Clause is contained in Pennsylvania’s Constitution of 1874, which states “[t]he General Assembly shall provide for the maintenance and support of a thorough and efficient system of public schools, wherein all the children of this Commonwealth above the age of six years may be educated, and shall appropriate at least one million dollars each year for that purpose.” [1874 Const., Art. X, Section 14; see also *William Penn II*, 170 A.3d at 418].

55. With regard to the prior version of the Education Clause, Dr. Black’s opinion was that, in requiring a thorough and efficient education system, the intention of the 1874 Education Clause was to serve all children together under one system of schools to be established by the Commonwealth, in order “to encourage and ensure the expansion of education into every nook and cranny of the State, particularly the smaller, poorer and more remote areas of the state.” [11/17/21 N.T. at 957; 11/18/21 N.T. 1029 (Black)].

56. In contrast to the public education system that existed in the mid-1800s, prior to the adoption of the 1874 Education Clause, today Pennsylvania operates an extensive system of public education serving approximately 1.7 million children. Pennsylvania’s system of public education includes 500 school districts;³ 160 brick and mortar charter and 14 cyber charter schools; 29 IUs that provide a variety of special education, professional development, technical assistance and other services to school districts, charter schools and private schools; and career and technical programs provided at over 134 high schools and 84 CTCs, offering over 1,720 approved programs of study to more than 66,000 students. [Stip. of Facts, ¶¶ 2-5].

57. Some of the delegates to the 1873 Convention advocated adding the word “uniform” to the Education Clause. However, that approach was ultimately rejected. As explained by the Supreme Court, “[r]eflecting a general preference for the protection of local school district prerogatives over state control that persists to this day in Pennsylvania and throughout the country, the Convention rejected a proposal to add the word ‘uniform’ to the Education Clause ahead of the words ‘thorough’ and ‘efficient’”. [*William Penn II*, 170 A.3d at 424].

58. Among other considerations, delegates were concerned “that local school districts would be precluded from raising additional funds to supplement and enrich the education they might provide, a disfavored intrusion upon local prerogatives.” *William Penn II*, 170 A.3d at 424. As stated by Delegate Hazard:

As to the school tax, we can, in any event, only get our share of that, and ***if we choose to pay something more for the privilege I speak of over and above the tax, let us have the right to do it.*** Let us have a higher class of studies where we want it.

[LR-02277-00002 (emphasis added)].

³ One of Pennsylvania’s 500 school districts, Bryn Athyn, does not operate any schools and had only one student (ADM) as of the 2019-20 school year. [Stip. of Facts, ¶ 2, n.1]. For this reason, some of the testimony and exhibits presented at trial (including certain summary and demonstrative exhibits) allude to 499 school districts.

59. In rejecting a uniformity provision, the 1873 Convention delegates also feared the risk of “a race to the bottom,” in which “far from elevating school districts with lower standards, the uniformity requirement would cause higher-flying schools to weaken their efforts.” [William Penn II, 170 A.3d at 424].

60. There were also concerns that use of the word “uniform” might prevent certain districts from teaching subjects or having resources that other districts could not afford. [11/17/21 N.T. at 1014–15 (Black)] or for which they lacked teachers. As explained by Delegate Hazard:

If this system is uniform, they must introduce the studies of all the higher branches in the country. In some of our schools they teach algebra and the natural sciences. They may not be ready to do that in the country. ***They may be unable to obtain competent teachers for that purpose.*** I think this word would bear this construction.

* * *

We do not want this word “uniform” here for it may be construed so as to lead to a conclusion on the part of school directors and others that we are to have only the elementary branches so as to be uniform with similar schools elsewhere in the country. It will admit of that construction. ***Why this word would operate even as against the introduction of chemical or philosophical apparatuses into one school because in another school they could not afford to have it.***

[LR-02123; LR-02277 (emphasis added)].

61. The 1873 Convention delegates also decided not to include any specific language about education details, such as relevant textbooks. [Constitution of 1874, Article X, § 1]. Therefore, how Pennsylvania was to structure the delivery of a thorough and efficient education was left up to the legislature to determine. [11/18/21 N.T. at 1050 (Black)].

62. The evidence presented by Petitioners in this matter does not show what the public understanding of the proposed Education Clause was when the voters ratified the 1874 Constitution.

B. Equal Protection Clause

63. Petitioners state their equal protection claim “solely in terms of Article III, Section 32 of our Constitution.” *William Penn II*, 170 A.3d at n.3.

64. By its terms, Article III, Section 32 proscribes the enactment of “local or special laws” when the circumstance “can be provided for by general law.” *Id.*

65. Unlike the Fourteenth Amendment to the United States Constitution, Section 32 does not speak expressly in terms of equal protection. Nevertheless, the Pennsylvania Supreme Court has “long gleaned equal protection principles from Section 32,” which it has held to be “substantially coterminous with the federal Equal Protection Clause.” *Id.*

III. OVERVIEW OF PENNSYLVANIA’S K-12 SYSTEM OF PUBLIC EDUCATION

A. Summary

66. Pennsylvania’s system of public education is robust and diverse. It includes 500 school districts, over 160 brick-and-mortar charter schools, 14 cyber charter schools, 29 Intermediate units, 84 Career and Technical Centers, and over 136 career and technical education programs, which are offered at Pennsylvania high schools, among various other institutions and programs. [Stip. of Facts ¶¶ 2-5].

B. The Public School Code of 1949

67. The Constitution does not define the system of public education, nor has the General Assembly enacted a statutory definition of that concept. However, a review of the laws of Pennsylvania discloses many enactments and institutions that are components of the current system of education.

68. The School Code is the basic law that governs public education in Pennsylvania. Although its provisions are too numerous to list here, the following aspects of the Public School Code help to illustrate its scope:

a. Article VI provides school districts, except school districts in a city of the first class, with broad powers of taxation. [24 P.S. §§ 6-601-6-689].

b. Article VI also provides for the Commonwealth to place financially distressed school districts under the direction of special boards of control or, in a city of the first class, a School Reform Commission. [24 P.S. §§ 6-691-6-697].

c. Article IX-A provides for the establishment of intermediate units. Each of Pennsylvania's 500 public school districts is assigned to one of 29 IUs. These IUs provide services, including instructional and operational services, to school districts and charter schools. [24 P.S. §§ 9-971A - 9-974].

d. Article XI provides for minimum salaries for teachers. The Public School Code, however, does not cap salaries, and boards of school directors may raise salaries. [24 P.S. §§ 11-1101 - 11-1195.1].

e. Article XIII provides for compulsory school attendance for children who are between the ages of 6 and 18. [24 P.S. § 13-1327].

f. Article V requires each school district to establish elementary schools. A board of school directors may also, in its discretion, establish kindergartens, high schools, trade schools, vocational schools, technical schools, cafeterias, agricultural schools, evening schools, libraries, gymnasias, playgrounds, adult education programs, and any other schools or departments that it sees proper to establish. [24 P.S. §§ 5-501 - 5-528].

g. Article XVII-A authorizes the establishment of charter schools, as public schools of the Commonwealth. [24 P.S. §§ 17-1701-A - 17-1751-A].

h. Article XV deals with, among other things, the subjects of instruction. [24 P.S. §§ 15-1501 - 15-1554].

69. The core provision of Article XV is Section 1511, 24 P.S. §15-1511, which states as follows:

In every elementary public and private school . . . the following subjects shall be taught, in the English language and from English texts: English, including spelling, reading and writing, arithmetic, geography, the history of the United States and of Pennsylvania, civics, including loyalty to the State and National Government, safety education, and the humane treatment of birds and animals, health, including physical education, and physiology, music and art. Other subjects shall be taught in the public elementary schools and also in the public high schools as may be prescribed by the standards of the State Board of Education.”

[24 P.S. §15-1511].

C. School Districts

70. Pennsylvania has 500 school districts, although only 499 of them operate schools. [Stip. of Facts ¶ 2; LR-01635, “LEA” Tab]. In 2020-21, Pennsylvania’s school districts operated 2999 schools, including elementary schools, middle schools, junior/senior high schools, and other schools with different combinations of grade levels. [LR-01635, “LEA and School” Tab].

71. Based on geographic size, Pennsylvania school districts vary significantly. The largest Pennsylvania school district is Keystone Central School District, which is 970.76 square miles. [LR-00531, Row 6983]. There are eight school districts that are larger than 400 square miles. [LR-00531, Rows 6983, 15101, 4904, 13484, 13913, 416, 15266, and 1067]. In contrast, the smallest Pennsylvania school district is Jenkintown School District, which is 0.48 square miles. [LR-00531, Row 6653]. There are 13 school districts that are smaller than 2.5 square miles. [LR-00531, Rows 6653, 1538, 9953, 1571, 8765, 8237, 4079, 1934, 15893, 6587, 6521, 11999, and 3023].

72. Likewise, based on enrollment, Pennsylvania school districts vary significantly. The largest school district is SDP, with 124,111 students in 2020-21. There are fifteen school districts with over 10,000 students. [LR-01635, “LEA” Tab]. The smallest school district is Austin Area School District, with only 188 students, including a senior class of 15 students. There are eighteen school districts with under 500 students.⁴ [LR-01635, “LEA” Tab].

73. In the 2020-21 school year, the Petitioner Districts collectively educated approximately 1.64% of Pennsylvania public school students. [LR-05042].

74. In the 2020-21 school year, SDP educated approximately 7.32% of Pennsylvania public schools students. [LR-05042].

75. The Petitioners presented direct, first-hand evidence regarding the current educational opportunities that nine Pennsylvania school districts are offering: the six Petitioner Districts, SDP, Otto-Eldred School District, and Springfield Township School District. The Petitioners did not present any direct, first-hand evidence regarding the educational opportunities that any of the remaining 489 Pennsylvania school districts are offering.

D. Charter Schools

76. In Pennsylvania, charter schools are public schools and there are two types of them - brick and mortar charter schools and cyber charter schools. [Stip. of Facts ¶ 3].

77. As of 2020-21, Pennsylvania charter schools educated 169,252 students, or approximately 10% of public school students in the Commonwealth. [LR-5038A]. Over the past nine years, charter schools have become an increasingly popular choice for students and families, and have educated a larger relative portion of Pennsylvania students. Between 2012-13 and 2020-21, the number of K-12 public school students who were being educated in Pennsylvania charter

⁴ One Pennsylvania school district, Bryn Athyn School District, does not enroll any students or operate any schools. [PX-02099, “LEA Tab”].

schools increased by 49,787 students (a 41.7% increase), while, during the same time frame, the overall number of K-12 public school students in Pennsylvania schools decreased by 61,656 students. [LR-5038A].

78. The Petitioners did not present any direct, first-hand evidence regarding the educational opportunities that any of Pennsylvania's brick-and-mortar charter schools are offering.

79. The Petitioners did not present any direct, first-hand evidence regarding the educational opportunities that twelve of the fourteen Pennsylvania cyber charter schools are offering. Although Petitioners presented evidence regarding two of the cyber charter schools, they did so only through cross-examination of witnesses that Legislative Respondents called during their case-in-chief.

80. In Pennsylvania, a cyber charter school is a public school that predominantly delivers educational services via video conferencing technology, based on a learning management system. A learning management system is like a virtual schoolhouse where all of the video conferencing interchange takes place. [2/8/22 N.T. at 12272-74 (Flurie)].

E. Career and Technical Education

81. Pennsylvania students have opportunities to participate in career and technical education (CTE) programs, which are programs of study, approved by the Department of Education, in industry-related fields and aligned to industry-related needs. [12/1/21 N.T. at 2102-2103 (Stem)].

82. In Pennsylvania, CTE programs offer students the opportunity to develop critical skills through a combination of classes and hands-on learning experiences, which allow them to apply academic concepts to real-world problems. [12/1/21 N.T. at 2105-06 (Stem); LR-04191].

83. Pennsylvania's CTE system is focused on providing young people with skills, knowledge, and habits that they need for success in college and careers: a strong academic and technical foundation; opportunities to explore and experience careers; and engagement in activities that develop employability skills. [LR-04216-00003].

84. CTE programs are offered in both traditional high schools and career and technical education centers. [12/1/21 N.T. at 2103 (Stem)]. The CTE programs typically include courses that are led by individuals who are qualified in the relevant industry field, as well as academic courses. [12/1/21 N.T. at 2104 (Stem)].

85. There are comprehensive CTC centers, part-time CTC centers, and CTE programs that various Pennsylvania high schools offer to students. [12/1/21 N.T. at 2107 (Stem)].

86. For a student in a CTE program, the program typically ends with the opportunity to obtain an industry credential and his or her performance in the program is typically measured by a NOCTI exam or a NIMS exam. [12/1/21 N.T. at 2103; (Stem)]. NOCTI exams are national assessments. [12/1/21 N.T. at 2113 (Stem)]. These exams are developed with industry partners and have two components - one performance-based and the other one written. [12/1/21 N.T. at 2111 (Stem)].

87. Across Pennsylvania, there are more than 80 CTE centers that offer Department-approved programs to thousands of students. [12/1/21 N.T. at 2107 (Stem); LR-04191]. As of 2018, there were 1,747 state-approved CTE programs, which were being offered to students through 84 CTCs and 140 high schools. [12/1/21 N.T. at 2110 (Stem); LR-04216-00003].

88. CTE programs prepare students for both college and career. [12/1/21 N.T. at 2109 (Stem); LR-04216]. They are available throughout Pennsylvania in most regions of the Commonwealth. [12/1/21 N.T. at 2115 (Stem); LR-04161-00020].

89. In Pennsylvania, while overall high school enrollment has decreased, student enrollment in CTE programs has increased. [12/1/21 N.T. at 2110 (Stem); LR-04216-00003].

90. As of the 2020-21 school year, CTC schools and CTE programs educated 48,809 students in Pennsylvania. [LR-05038A]. Over the past nine years, there has been an 8.2% increase in the number of Pennsylvania public school students who are educated through CTC programs. [LR-05038A].

91. Except for the CTE programs that are housed at the Greater Johnstown School District and the School District of Lancaster, the Petitioners did not present any direct, first-hand evidence regarding the educational opportunities that any Pennsylvania CTC schools offer.

F. Intermediate Units

92. Pennsylvania has 29 intermediate units. [Stip. of Facts ¶ 4].

93. Pennsylvania's IUs provide a variety of services, some of which are provided for a fee, to school districts, charter schools, and private schools, including special education, professional development, and technical assistance services. [Stip. of Facts ¶ 4].

94. Some IUs provide instructional services to schools, most often in the area of special education, either in the school or a space that the intermediate unit leases. [Stem Dep. at 19:5 to 19:17]. Some IUs also provide career and technical education to students, who are not charged for such services. [Stem Dep. at 20:1 to 20:9].

95. The Pennsylvania Department of Education provides funding to IUs. [12/1/21 N.T. at 2041 (Stem)].

96. Across the Commonwealth, IUs provide a significant amount of support to school districts with regard to the use of curriculum resources. [12/1/21 N.T. at 2073 (Stem)].

97. In addition, IUs directly educate a small number of students. In 2020-21, IUs educated 10,223 students. [LR-5038A].

98. The Petitioners did not present any direct, first-hand evidence regarding the educational opportunities that Pennsylvania Intermediate Units provide.

G. Libraries

99. Pennsylvania's system of public education also includes a network of 604 state-supported public libraries and 29 District Library Centers, which provide resources, technology, and programs that support pre-K to 12 students, as well as adult learners, in all 67 counties. [PX-01830-00014].

100. According to data from the National Center for Education Statistics (NCES), Pennsylvania has 452 public libraries. Based on this data, Pennsylvania has the 5th most public libraries of any state in the United States of America, including more public libraries than California and Florida. [NCES, Digest of Education Statistics, Table 701.60, Column 3 (2022), available at https://nces.ed.gov/programs/digest/d21/tables/dt21_701.60.asp].

H. Private Schools

101. The General Assembly has established the Educational Improvement Tax Credit program ("EITC") and the Opportunity Scholarship Tax Credit program ("OSTC"). These programs allow businesses to make contributions to the programs and claim a tax credit in connection with those contributions. [2/2/22 N.T. at 11365-67 (Anderson)]. Under these programs, low-income students and students who attend low-achieving public schools receive funding in the form of scholarships that help them to attend a non-public school or a participating public school. 24 P.S. § 20-2000-B, et seq.

I. Overview of the Pennsylvania Department of Education

102. The General Assembly has given the Department of Education the power and duty to administer the laws of the Commonwealth with regard to the establishment, maintenance, and conduct of the public schools. [Administrative Code of 1929, Section 1302, 71 P.S. § 352].

103. Noe Ortega is the acting Secretary of the Pennsylvania Department of Education. Prior to Secretary Ortega assuming his role as the acting Secretary, Pedro Rivera was the Secretary of Education. Former Secretary Rivera was previously the superintendent of the School District of Lancaster, one of the Petitioner Districts in the case. [12/2/21 N.T. at 2365 (Stem)]. In fact, former Secretary Rivera verified the Petition for Review on behalf of the School District of Lancaster. [Petition for Review, p. 134].

104. The Department of Education has a deputate for elementary and secondary education. [LR-00538A]. Within that deputate, the Department has multiple bureaus, divisions, and offices, including the Bureau of School Support, Bureau of Curriculum Assessment and Instruction, Bureau of Special Education, Bureau of Career and Technical Education, the Safe Schools office, the School Services office, and the School Improvement office. [LR-00538A; 12/1/21 N.T. at 2050 (Stem)].

105. Matthew Stem previously oversaw this deputate, serving as the Deputy Secretary for Elementary and Secondary Education for about six years. [11/30/21 N.T. at 1587 (Stem)]. Mr. Stem previously worked for the School District of Lancaster, for 19 years. Mr. Stem held multiple positions with the School District of Lancaster, including Superintendent for Secondary Schools, sixth grade and middle school teacher, dean of students of an elementary school, elementary school principal, and director of student services. [11/30/21 N.T. at 1588

(Stem)]. Mr. Stem is currently employed as the Assistant Executive Director of the Lancaster-Lebanon Intermediate Unit 13. [11/30/21 N.T. at 1586 (Stem)].

106. The Bureau of Curriculum Assessment and Instruction contains:

- a. The Division of Federal Programs, which oversees all of the federal title funding in the Commonwealth;
- b. The Division of Assessment and Accountability, which oversees the PSSA, Keystone exam system, and assessment budget; and,
- c. The Division of Instructional Quality, which oversees content area, technical assistance, and professional development supports. [12/1/21 N.T. at 2050-51 (Stem); LR-00538A].

107. The Bureau of Special Education is composed of:

- a. Three divisions of Monitoring and Improvement (East, West, and Central). These divisions oversee the special education services that are delivered to Pennsylvania students, along with the Commonwealth's implementation of the Individuals with Disabilities Education Act.
- b. The Division of Analysis and Financial Reporting, which deals with state and federal special education funding. [12/1/21 N.T. at 2051-52 (Stem); LR-00538A].

108. The Bureau of School Support is composed of:

- a. The Division of Planning and Professional Development, which oversees things like school district comprehensive plans and continuing professional education for teachers;

b. The Division of Student Services, which oversees migrant education, 21st century learning, McKinney-Vento, and certain other items that are part of the Department of Education's budget; and,

c. The Division of Charter Schools, which provides supports to authorizers of charter schools and guidance to those schools in their delivery of instruction. [12/1/21 N.T. at 2052 (Stem); LR-00538A].

109. The Bureau of Career and Technical Education deals with the financial and instructional elements that undergird the CTE programs in the Commonwealth. [12/1/21 N.T. at 2052 (Stem); LR-00538A].

110. The Safe Schools Office oversees all statutory, regulatory, and policy functions that pertain to safe schools, including safety and security grants and social and emotional learning supports. [12/1/21 N.T. at 2052-53 (Stem); LR-00538A].

111. The School Services Office administers a wide variety of statutory and regulatory programs, including the Opportunity Scholarship Tax Credit Program. [12/1/21 N.T. at 2053 (Stem); LR-00538A].

112. The School Improvement Office oversees many of the Department of Education's programs that concern meaningful differentiation for the CSI, ATSI and TSI schools. [12/1/21 N.T. at 2053 (Stem); LR-00538A].

J. Resources Available to Districts

113. While Pennsylvania is a local control state, the Department of Education still provides significant assistance to school districts. For instance, the Department of Education established and administers the Standards Aligned System (SAS), which is a portal of educational resources that are designed to help schools. [12/1/21 N.T. at 2054-2055 (Stem)].

114. As stated on the portal website, SAS “is a comprehensive research-based resource[,]” for Pennsylvania schools and educators. SAS focuses on six elements: standards, assessment, curriculum framework, instruction, materials and resources, and safe and supportive schools. The Department of Education describes SAS as “a state-of-the-art portal.” [LR-04208].

115. There is no charge for school districts to use SAS. [12/1/21 N.T. at 2090 (Stem)].

116. SAS provides support such as curriculum and professional development resources for teachers and administrators and is “one of the primary mechanisms” that the Department uses to provide technical support and assistance to schools. [12/1/21 N.T. at 2055 (Stem)]. The Department’s Division of Instructional Quality also “provides guidance, materials and resources to educators regarding curriculum, instruction, assessment and regulations passed by the Pennsylvania State Board of Education related to these various areas.” [12/1/21 N.T. at 2068 (Stem); LR-04200-00001].

117. SAS also includes sections that are for teachers, specifically. These sections are designed to help teachers with organizing their lessons and assessments, find professional development programs, and connect with other educators in the state. [12/1/21 N.T. at 2087-2088 (Stem)].

118. Within its Assessment Center, SAS provides teachers with tools or training modules regarding the process of creating and providing assessments to students. [12/1/21 N.T. at 2063-64 (Stem); LR-04206].

119. One section of SAS is “Curriculum Frameworks,” which provides resources to assist districts with developing curricula that are aligned to Pennsylvania’s academic standards. [12/1/21 N.T. at 2066 (Stem); see also LR-04200; LR-00597].

120. Curriculum Frameworks identify “the concepts and competencies that are in the standards in a format that would help districts to be able to build out a curriculum and . . . daily lesson plans.” [12/1/21 N.T. at 2071 (Stem)]. Through SAS, the Department also provides curriculum maps and modeled curriculum, which, while similar in purpose to Curriculum Frameworks, provide more detail in English language arts, math and science. [12/1/21 N.T. at 2072-2073; 2084-2085 (Stem)].

121. If school districts choose to use Curriculum Frameworks to map out their instruction, the Department has some personnel available to assist them in doing so. [12/1/21 N.T. at 2073 (Stem)].

122. The Instruction area in SAS provides additional resources and links to third party resources and additional supports regarding teaching and learning. [12/1/21 N.T. at 2074-75 (Stem); LR-04025]. The Instruction area, for example, includes a Pennsylvania educational roadmap that addresses topics such as a student-centered learning environment and systems conditions and provides additional resources to assist districts with planning for and delivering instruction to students. [12/1/21 N.T. at 2075 (Stem)].

123. SAS also includes instructional toolkits that are designed to help districts set up advanced coursework activities, such as dual enrollment programs, AP and IB programs, independent study programs, and work-based learning experiences. [12/1/21 N.T. at 2078-79; (Stem); LR-04025]. The Department assists districts with implementing these tool kits. [12/1/21 N.T. at 2081 (Stem)].

124. The Materials and Resources section of SAS contains even more resources to assist schools with curriculum development and assessments, including sample unit plans, lesson plans, and assessments. [12/1/21 N.T. at 2082-84 (Stem); LR-04203].

125. For example, the work-based learning tool kit includes information about research on the value of work-based learning, different types of work-based learning experiences, how to set up those experiences, the costs that are involved with them, and districts that have successful work-based learning programs in place. [12/1/21 N.T. at 2080-81 (Stem); LR-00663].

126. SAS also includes the learning progressions resource, which shows the way that, from one grade level in school to the next, content, skills, and competencies transition and become more sophisticated. [12/1/21 N.T. at 2085-2086 (Stem)].

127. Within the SAS portal, the Safe and Supportive Schools section includes resources concerning social/emotional learning, trauma, and informed instruction and practices, including a link to some of the “all-hazard” planning resources for safe schools. [12/1/21 N.T. at 2087 (Stem)].

128. In addition to the SAS portal, the Department of Education has created the Pennsylvania Evidence Resource Center. This center is a repository of evidence-based strategies that can be implemented in schools, with the information broken down based on categories from the Future Ready PA Index. The Pennsylvania Evidence Resource Center is free to access online. [11/30/21 N.T. at 1892-93 (Stem)].

129. The Future Ready PA Index is a public facing school progress report that goes beyond providing a single summative score. It includes a range of measures related to Pennsylvania schools. [PX-01703-00001].

130. Pennsylvania school districts are required to develop comprehensive plans that are aligned with practices of continuous improvement and improved educational practices. Comprehensive plans set forth a school district’s current practices, which challenges the school district faces, and the school district’s plan to address those challenges. The Pennsylvania

Department of Education leads this comprehensive planning program and provides resources to school districts to assist them in the comprehensive planning process. [12/1/21 N.T. at 2094-97 (Stem)].

131. When a community member believes that a school district has a curriculum deficiency, that person may file with the Department of Education a complaint about the perceived deficiency. The Department then investigates the complaint and, based on the investigation, issues a letter of findings and, as warranted, recommended corrective actions. [12/1/21 N.T. at 2061-2062; 2101 (Stem)].

132. When it comes to the Petitioner Districts, in particular, the Department of Education is not aware of any allegations of curriculum deficiencies that have been filed with it. [12/1/21 N.T. at 2102 (Stem)].

133. The Petitioner Districts did not introduce evidence that any allegations of curriculum deficiencies have been filed with the Department of Education.

134. The Department of Education operates Community Education Councils, which, in partnership with postsecondary educational institutions, provide postsecondary educational opportunities in places where those institutions are not otherwise generally present. [01/18/2022 N.T. at 8787 (Ortega)].

K. Adult Education

135. The Department of Education distributes federal and state funding for Adult Basic Education programming. [01/18/2022 N.T. at 8788 (Ortega); LR-03269-00009].

136. The Department of Education distributes federal and state funds for Family Literacy Education. [01/18/2022 N.T. at 8789 (Ortega); LR-03269-00009].

137. Once the Department of Education issues grants to a given provider of Adult Basic Education services, it enters into a contractual relationship with that provider. The

Department sets out specific duties that the provider will carry out in its role as the grantee and monitors whether that provider is carrying out those duties by receiving reports, reviewing invoices, and the like. [01/18/2022 N.T. at 8789-90 (Ortega); LR-03269].

138. The Department of Education issues Adult Education and Family Literacy Guidelines, which include requirements that providers of adult education and family literacy services must follow as they provide those services. [01/18/2022 N.T. at 8794-95 (Ortega); LR-03269].

139. The Department of Education's Postsecondary and Higher Education Deputate has about 80 employees. [01/18/2022 N.T. at 8804 (Ortega)].

L. State Board of Education

140. The State Board is an administrative board that, under Section 202 of the Administrative Code of 1929, is housed within the Department of Education. The State Board has the powers and duties that Article XXVI-B of the Public School Code has delegated to it. [See 24 P.S. §§ 26-2601-B - 26-2606-B].

141. The State Board has 21 voting members. The Governor appoints seventeen of them. The chairmen and minority chairmen of the House and Senate Education Committees serve as four ex officio members. [24 P.S. § 26-2602-B].

142. The Secretary of Education or his designee serves as the State Board's non-voting chief executive officer. [24 P.S. § 26-2602-B].

143. The State Board is organized into two councils, a ten-member Council of Basic Education and a ten-member Council of Higher Education. The chairman of the State Board, who the Governor designates for that role, serves on both councils. In total, twenty-one members are authorized to serve on the State Board, with the twenty-first member serving as the chair of the

State Board and bridging the gap between both councils. [12/10/21 N.T. at 4172-73 (Molchanow)].

144. Members of the State Board are volunteers in that capacity. [12/13/21 N.T. at 4308-09 (Molchanow)]. The State Board meets at least six times annually. [LR-02237-00001]. The State Board has two full-time employees: an executive director and an administrative assistant. The State Board also has counsel, who is provided to it through the Governor's Office of General Counsel. [12/13/21 N.T. at 4309 (Molchanow)].

145. The State Board's decisions are not always unanimous. Its members have differing opinions and beliefs about the issues that the State Board addresses. [12/13/21 N.T. at 4310 (Molchanow)].

146. The State Board is responsible for overseeing the educational programming from Pre-K through adult and post-secondary education. It is responsible for establishing academic standards and assessments as well as educator certifications. [12/10/21 N.T. at 4172 (Molchanow)].

147. The State Board views itself as the regulatory arm of the Department of Education. [Parties' Joint Designations of the 5/18/20 Deposition of State Board of Education Designee, Karen Molchanow (hereinafter, "Molchanow Dep.") at 17:9-10, 18:9-10].

148. The State Board is responsible for developing a state-wide Master Plan for Basic Education and a Master Plan for Higher Education. These plans contain policy recommendations for the Governor and General Assembly to consider. [24 P.S. § 26-2603-B; 12/13/21 N.T. at 4297-98 (Molchanow)].

149. In 2018, the State Board released its current Master Plan for Basic Education. While the Master Plan for Basic Education includes recommendations, it does not

create any requirements. In fact, the State Board does not believe that anyone is required to respond to the Master Plan for Basic Education and it does not “directly engage in follow-up” regarding that plan. While the State Board regularly receives reports from the Department of Education, those reports do not address the helpfulness or usefulness of the policy recommendations that the State Board has made in its Master Plan for Basic Education. [12/13/21 N.T. at 4299-4300 (Molchanow)].

150. The State Board does not know when it last prepared a Master Plan for Basic Education before it prepared the current one, although Ms. Molchanow was able to find one from the late 1990s. [12/13/21 N.T. at 4301 (Molchanow)]. As of 2017, the State Board is required to prepare a Master Plan for Basic Education every 10 years. Previously, it was required to prepare one every five years. [Act 55 of 2017; 12/13/21 N.T. at 4300-01 (Molchanow)]. Ms. Molchanow does not know why there was a twenty-year gap (approximately) between the State Board’s preparations of its Master Plans for Basic Education. [12/13/21 N.T. at 4301 (Molchanow)].

151. The State Board engaged an individual, through the Capital Area IU, to take the lead in preparing the Master Plan for Basic Education. [12/13/21 N.T. at 4298-99 (Molchanow)].

152. In its Master Plan for Basic Education, the State Board asserts that education funding must be expertly and efficiently managed at both the state and local levels. The State Board recommends that the General Assembly consider the adequacy of school funding, but does not identify a specific amount of funding that would be necessary to achieve adequacy. The State Board, likewise, does not assert that Pennsylvania schools are under-funded. [12/13/21 N.T. at 4419-22 (Molchanow)].

153. The State Board does not conduct any cost-effectiveness analysis to accompany its Master Plan of Basic Education. [12/13/21 N.T. at 4298 (Molchanow)].

154. The Master Plan for Basic Education has a narrow scope. It is focused solely on the ten factors that are set forth in 24 P.S. § 26-2603-B(i). In the plan, the State Board does not attempt to balance education with any of the Commonwealth government’s myriad other responsibilities. [12/13/21 N.T. at 4306-07 (Molchanow)].

155. In Act 144 of 2006, the General Assembly authorized the State Board to solicit bids from outside consultants to conduct a “Costing Out Study” which was to “arrive at a determination of the basic cost per pupil to provide an education that will permit a student to meet the State’s standards and assessments.” [PX-00099-0006].

156. The State Board selected Augenblick, Palaich and Associates (“APA”) to conduct the Costing Out Study. [PX-00099-0006]. APA’s Costing Out Study (“Costing Out Study”) was presented to the State Board in December 2007. [PX-00099-0001]. The Costing Out Study will be discussed in more detail in Section IV.F, *infra*.

157. Since commissioning the Costing Out Study in 2002, the State Board has not conducted an analysis of whether the Commonwealth’s school districts have the resources that they need in order to educate students to the rigorous Pennsylvania Core Standards. The State Board commissioned the Costing Out Study before Ms. Molchanow’s tenure on the State Board. [12/10/21 N.T. at 4213 (Molchanow)].

158. Although, in 2018, the State Board recommended revisiting the 2007 Costing Out Study, which opined on education funding in the Commonwealth, it has expressed no position on the validity, methodology, or usefulness of that study. [12/13/21 N.T. at 4304 (Molchanow)].

M. Academic Standards

159. The State Board has developed academic standards. [12/13/21 N.T. at 4312-13 (Molchanow)]. School districts are required to align their curricula and instruction to the standards, but they have autonomy in developing the curricula and the sequencing of their instruction. [12/1/21 N.T. at 2057-2058 (Stem)].

160. The Pennsylvania standards include, among other examples, standards for health, safety, and physical education; career education at work; English language arts and math, science, civics and government; economics, geography and history; arts and humanities; family and consumer sciences; world languages; business; computer information and technology; drivers' education; English language development; and early childhood education. [12/1/21 N.T. at 2059-2061 (Stem)]. The State Board also endorsed standards for computer science, which are designed to help districts "align" their computer science instruction. [12/1/21 N.T. at 2060-2061 (Stem)].

161. The Pennsylvania academic standards are high-quality expectations of student academic ability. [11/30/21 N.T. at 1608-1609 (Stem)]. The standards are uniform and rigorous. [11/30/21 N.T. at 1609 (Stem)].

162. In 2014, the State Board adopted new ELA and math PA Core Standards. [12/13/21 N.T. at 4321 (Molchanow)].

163. The 2014 PA Core Standards were more rigorous than previous academic standards. In addition, the State Board adopted new cut scores which demarcate the lines between levels of proficiency (*i.e.*, below basic; basic; proficient; and advanced). [12/13/21 N.T. at 4316-17 (Molchanow)].

164. When a school system adopts more rigorous standards, this has been shown to improve educational offerings. [12/13/21 N.T. at 4318 (Molchanow)].

165. All Pennsylvania school districts are required to align their curricula with the new PA Core Standards (and other state standards that the State Board has adopted). Because the new PA Core standards are more rigorous than the old ones, and school districts are required to align their curricula to them, it is the State Board's understanding that school district curricula have become more challenging. [12/13/21 N.T. at 4318-19 (Molchanow); 22 Pa. Code § 4.12.].

166. In 2015, the PSSAs were aligned with the new PA Core Standards. [12/13/21 N.T. at 4321 (Molchanow)]. The State Board received data regarding the impacts of the newly realigned PSSA exams, which showed a drop in scores between 2014 and 2015. The State Board did not take this drop to mean that the quality of education in Pennsylvania became worse. [12/13/21 N.T. at 4321 (Molchanow)].

167. The State Board recommended that PDE communicate to parents and others that the PSSA assessments themselves had changed and that, as a result, there would be a drop in the exam scores in 2015. [12/13/21 N.T. at 4349-50 (Molchanow); LR-01014].

168. The State Board sets cut scores for the PSSAs and Keystone Exams. The Department of Education facilitates the development of cut score recommendations and then, at a public meeting, presents them to the State Board for its consideration. [12/13/21 N.T. at 4325-26 (Molchanow)]. As part of this presentation, the State Board receives an impact chart, which shows the percentages of students that would fall into the four performance levels (advanced, proficient, basic, and below basic) based on the initial administration of the assessments. [12/13/21 N.T. at 4330-31 (Molchanow)]. Following the initial administration of the 2015 ELA and math PSSAs, a review of the corresponding impact charts influenced the State Board's determination of where to set the cut scores for those newly aligned assessments. [12/13/21 N.T. at 4331-35 (Molchanow); LR-00992].

169. When the Keystone Exams were established, the State Board intended to consider the exams in relation to statistics regarding college success. However, because passing the exams never became a requirement for graduating from Pennsylvania public schools, the State Board has not been able to conduct that analysis. In order to complete its “intended validation” of the Keystone Exams, in other words, the State Board needed data regarding students who had passed the Keystone Exams as a graduation requirement and data regarding the students’ postsecondary and workforce success. Those types of data have never become available. [12/13/21 N.T. at 4337-38 (Molchanow)].

170. While the State Board receives some data regarding the results that CTE students achieve on standardized state assessments, Ms. Molchanow did not recall any data regarding a relationship between the scores on those assessments and career success. [12/13/21 N.T. at 4339 (Molchanow)].

171. The State Board does not analyze the relationship between PSSA or Keystone Exam scores and student grades. [12/13/21 N.T. at 4340 (Molchanow)].

172. The State Board has not conducted a “validation study” regarding whether success on the PSSAs and Keystone Exams is correlated with college and career success. [12/13/21 N.T. at 4342 (Molchanow)].

173. The State Board has supported PDE’s efforts to reduce the amount of time that is spent on testing students. [12/13/21 N.T. at 4348 (Molchanow)].

174. The State Board has heard concerns about teachers who are “teaching to the test,” *i.e.*, teachers that spend too much time focused on standardized tests. [12/13/21 N.T. at 4381 (Molchanow)].

175. The State Board does not believe that state assessments are meant to be used to rank schools, as they are not norm-based assessments. [12/13/21 N.T. at 4349 (Molchanow)].

176. Although the State Board adopts state standards, performance level descriptors, and cut scores, it is not involved in the actual setup of the PSSAs or Keystone Exams. In fact, the State Board does not actually review the technical reports regarding how these assessments are created or given to students. [12/13/21 N.T. at 4370 (Molchanow)].

N. Local Control

177. Pennsylvania is a local control state, meaning that the authority for public education in the Commonwealth is vested in local school boards. These local school boards have authority over the development of policy, governance, and budgets for the operations of their school districts. [12/2/21 N.T. at 2451-52 (Stem)].

178. Pennsylvania has a long history of local control of education. In Pennsylvania, for example, local governing boards have long been involved in decisions about textbooks, materials, and curriculum. [12/13/21 N.T. at 4384 (Molchanow)].

179. The State Board does not determine or dictate the methodologies that school districts use to meet its standards, including decisions regarding curricula, textbooks, and delivery, which all remain local decisions. [Molchanow Dep. at 41:1-6].

180. The State Board believes that local control through communities and community input in schools is a positive attribute of a school system. [12/13/21 N.T. at 4383 (Molchanow)]. In addition, the State Board believes that transparency at the local and state levels is fundamental to Pennsylvania's system of education. [12/13/21 N.T. at 4384 (Molchanow)].

181. The State Board believes that local taxation is part of the local control of school districts. [12/13/21 N.T. at 4385-86 (Molchanow)].

182. Petitioners’ expert witness, Professor Black, agreed based upon his involvement in education policy that many citizens want to protect the rights of higher wealth school districts to spend their own money to educate the students in those districts. He further testified that he does not believe such a policy view to be irrational. [11/17/21 N.T. at 1016 (Black)]

O. General Assembly’s Management of System Through School Code

183. The General Assembly has enacted statutes, codified primarily within the Public School Code, that govern how the Commonwealth distributes funds among the school districts. In addition to these funding statutes, the General Assembly has enacted a number of education-related laws that do not specifically address education funding, or that address both education funding and other subject matters related to education. David Donley, Republican Staff Executive Director for the Pennsylvania House Appropriations Committee, testified that public education is “an area of legislative focus” every year. [2/3/22 N.T. at 11657 (Donley)].

184. For instance, Act 5 of 2017 was enacted by the General Assembly in order to reform the PSERS retirement system. This pension reform act transformed PSERS from a defined benefit plan to a hybrid plan that included a defined contribution component, in an effort to remove some of the long-term burden that teacher pension obligations have on school districts. [2/3/22 N.T. at 11661–63 (Donley)].

185. Other examples of recent legislation governing public education include Act 158 of 2018, which established new high school graduation requirements and Act 26 of 2019, 24 P.S. §§ 13-1326, which lowered the age of compulsory education to six years old. Additional education-related statutes enacted by the General Assembly since 2014 include, but are not limited to, the following:

a. **Act 40 of 2014.** This act authorizes school districts to excuse students from school attendance to participate in an educational tour or trip that the district itself does not sponsor. [Public School Code of 1949, Act of March 10, 1949, P.L. 30, No.14, as amended by the Act of Apr. 18, 2014, P.L. 634, No. 40 (“Act 40”), 24 P.S. § 13-1329].

b. **Act 69 of 2014.** This act created the Dyslexia and Early Literacy Intervention Pilot Program. It gave the Department of Education the authority to select at least eight school districts to participate in that program and established that, through the program, students in the selected districts who were suspected of having an early reading deficiency or dyslexia were eligible to receive reading intervention services to measure the effectiveness of early reading assistance programs. The act authorized the pilot program to operate for five full school years, beginning with the school year that began at least six months after the Act’s effective date. [Public School Code of 1949, Act of March 10, 1949, P.L. 30, No.14, as amended by the Act of Jun. 26, 2014, P.L. 773, No. 69 (“Act 69”) and the Act of Jun. 19, 2018, P.L. 237, No. 37, 24 P.S. §§ 17-1701-C-17-1705-C].

c. **Act 70 of 2014.** This act established that, beginning in the 2015-2016 school year, school districts may offer instruction in the Holocaust, genocide, and human rights violations. The act includes certain criteria for how school districts should offer these courses and how this material comports with the Department of Education’s regulations. [Public School Code of 1949, Act of March 10, 1949, P.L. 30, No.14, as amended by the Act of Jun. 26, 2014, P.L. 776, No. 70 (“Act 70”), 24 P.S. § 15-1554].

d. **Act 71 of 2014.** This act requires school entities to adopt age-appropriate youth suicide awareness and prevention policies and publish those policies to staff, parents, and the public. It also includes requirements for what must be included in each policy.

[Public School Code of 1949, Act of March 10, 1949, P.L. 30, No.14, as amended by the Act of Jun. 26, 2014, P.L. 779, No. 71 (“Act 71”), 24 P.S. §§ 15-1526-15-1527].

e. **Act 108 of 2014.** This act sets requirements for school districts to reimburse community colleges who participate in dual enrollment programs, which allow high school students to take classes at the community colleges for both high school and college credit. [Public School Code of 1949, Act of March 10, 1949, P.L. 30, No.14, as amended by the Act of Jul. 2, 2014, P.L. 986, No. 108 (“Act 108”), 24 P.S. § 19-1913-A].

f. **Act 122 of 2014.** This act addresses sales of unused school lands and buildings and established the Office for Safe Schools. [Public School Code of 1949, Act of March 10, 1949, P.L. 30, No.14, as amended by the Act of Jul. 9, 2014, P.L. 1039, No. 122 (“Act 122”), 24 P.S. §§ 7-707, 13-1302-A].

g. **Act 196 of 2014.** This act provides that a student’s diploma from a home education program has the same weight as a high school diploma, as long as, in acquitting the diploma, the student met certain requirements for graduation. The act also directed the Department of Education to develop eligibility criteria and an application process for approving high school diplomas for home-schooled students. [Public School Code of 1949, Act of March 10, 1949, P.L. 30, No.14, as amended by the Act of Oct. 31, 2014, P.L. 2967, No. 196 (“Act 196”), 24 P.S. § 13-1327.1].

h. **Act 35 of 2016.** In addition to addressing basic education funding, this act directed the Secretary of Education to enter into and administer a membership in a regional compact that governs postsecondary distance education. [Public School Code of 1949, Act of March 10, 1949, P.L. 30, No.14, as amended by the Act of Jun. 1, 2016, P.L. 252, No. 35 (“Act 35”), 24 P.S. § 1-124].

i. **Act 86 of 2016.** This act made omnibus amendments to the Public School Code. Among other changes, Act 86 expanded the duties of the Public School Building Construction and Reconstruction Advisory Committee, required the State Board of Education to review and report on redundant or overly burdensome data collection requirements imposed on public school entities, provided for substitute teaching by individuals without certificates in limited circumstances, and, allowed students to complete courses in computer science or information technology during high school to satisfy a math or science graduation requirements. [Public School Code of 1949, Act of March 10, 1949, P.L. 30, No.14, as amended by the Act of Jul. 13, 2016, P.L. 716, No. 86 (“Act 86”), 24 P.S. §§ 1-125, 2-221.2, 6-689, 6-601-B-6-603-B, 11-1154, 12-1201.1, 12-1204, 12-1204.2, 12-1205.2, 13-1313.1, 13-1372, 13-1376, 14-1401, 14-1414.3-14-1414.8, 14-1401-A-14-1408-A, 15-1501-H, 15-1502-H, 15-1511-H, 15-1521-H-15-1527-H, 15-1501-I-15-1510-I, 16-1605, 17-1703-A, 17-1724-A, 17-1725-A, 18-1855, 19-1904-A, 19-1913-A, 19-1902-C, 19-1902-E, 19-1901-G-19-1917-G, 20-2001-B-20-2013-B, 23-2320, 25-2509.1, 25-2509.5, 25-2509.8, 25-2510.3, 25-2599.6, 25-2599.7].

j. **Act 118 of 2016.** For public school entities, this act extended for one year the applicable continuing professional education plan deadlines. [Public School Code of 1949, Act of March 10, 1949, P.L. 30, No.14, as amended by the Act of Nov. 2, 2016, P.L. 971, No. 118 (“Act 118”), 24 P.S. §§ 12-1205.1-12-1205.3].

k. **Act 138 of 2016.** This act revised truancy-related provisions in the Public School Code, including provisions regarding definitions, procedures, and penalties. [Public School Code of 1949, Act of March 10, 1949, P.L. 30, No.14, as amended by the Act of Nov. 3, 2016, P.L. 1061, No. 138 (“Act 138”), 24 P.S. §§ 13-1325, 13-1326, 13-1327.2, 13-1329, 13-1333, 13-1333.1-13-1333.4].

l. **Act 143 of 2016.** This act amended the Public School Code to provide for expedited certification and reduced certification fees for educators who were members of the military or their spouses or veterans of the military or their spouses. It also calls for removal of inactive certifications in some instances. [Public School Code of 1949, Act of March 10, 1949, P.L. 30, No.14, as amended by the Act of Nov. 3, 2016, P.L. 1097, No. 143 (“Act 143”), 24 P.S. §§ 12-1205, 12-1205.2, 1216.1].

m. **Act 6 of 2017.** This act rescinded a statutory requirement for the development and implementation of additional Keystone Exams and created an alternative pathway for Career and Technical Education students to demonstrate readiness for high school graduation. [Public School Code of 1949, Act of March 10, 1949, P.L. 30, No.14, as amended by the Act of Jun. 21, 2017, P.L. 200, No. 6 (“Act 6”), 24 P.S. § 1-121].

n. **Act 55 of 2017.** This act made omnibus amendments to the Public School Code and authorizes school entities to conduct one school security drill per school year in each school building, in place of a monthly fire drill. [Public School Code of 1949, Act of March 10, 1949, P.L. 30, No.14, as amended by the Act of Nov. 6, 2017, P.L. 1142, No. 55 (“Act 55”), 24 P.S. §§ 1-121, 1-126, 3-328, 6-694-A, 6-695-A, 7-732.1, 10-1006, 10-1073, 10-1077, 11-1124, 11-1125.1, 11-1131, 12-1204, 12-1216, 13-1337, 14-1402-A, 14-1403-A, 14-1405-A-14-1407-A, 15-1517, 15-1547, 15-1549, 15-1549.1, 17-1729.1-A, 19-1913-A, 20-2006-B, 20-2001-C, 20-2002-C, 20-2004-C, 23-2321, 25-2501, 25-2502.53, 25-2509.1, 25-2510.3., 25-2599.6, 26-2603-B].

o. **Act 35 of 2018.** This act requires every school entity to administer a locally developed assessment of U.S. History, Government, and Civics to students in grades 7-12. The topics on the assessment must include the U.S. Constitutional structure and the rights and

responsibilities of citizenship. The Department of Education is required to conduct a survey regarding the format of each assessment, number of students who took and passed the assessment, and grade levels or courses in which the assessment was administered. [Public School Code of 1949, Act of March 10, 1949, P.L. 30, No.14, as amended by the Act of Jun. 19, 2018, P.L. 227, No. 35 (“Act 35”), 24 P.S. § 16-1605.1].

p. **Act 37 of 2018.** This act extended the term of the Dyslexia and Early Literacy Intervention Pilot Program for an additional two years and established that at least eight school districts, enrolling fewer than 15,000 students, must participate in the program. [Public School Code of 1949, Act of March 10, 1949, P.L. 30, No.14, as amended by the Act of Jun. 19, 2018, P.L. 237, No. 37 (“Act 37”), 24 P.S. §§ 1-102, 17-1702-C, 17-1703-C].

q. **Act 39 of 2018.** This act made omnibus amendments to the Public School Code and requires the Department of Education to make available information about the College Navigator Website and High Priority Occupations. The omnibus amendments delayed by one year (to 2020-21) the requirement to obtain proficiency on the Keystone Exams in order to graduate from a school district, imposed requirements on third-party service contracts, allowed public school entities to hold executive sessions for school safety, authorized schools to test for lead in water, eliminated a timeframe for textbook adoption, established a process for filling classes that were left vacant due to teacher suspensions, established requirements for vocational certificates, clarified school attendance policies, extended the Recovery High School Pilot Program for drug and alcohol recovery, established that schools must conduct a security drill each year, authorized schools to conduct two additional school security drills, increased the total amount of tax credits that are available under the Educational Improvement Tax Credit program, provided for a community college funding formula, provided for a library funding formula, and provided

for a special education funding formula for intermediate units. [Public School Code of 1949, Act of March 10, 1949, P.L. 30, No.14, as amended by the Act of Jun. 22, 2018, P.L. 241, No. 39 (“Act 39”), 24 P.S. §§ 1-121, 4-425, 5-528, 7-732.1, 7-742, 8-803 11-1125.1, 12-1204.2, 13-1326, 13-1327.3, 13-1329, 13-1333.3, 13-1337, 14-1406-A, 14-1407-A, 19-1913-A, 20-2002-B, 20-2003-B, 20-2004-B, 20-2005-B, 20-2006-B, 20-2001-H-20-2003-H, 23-2322, 25-2509.1, 25-2510.3, 25-2599.6].

r. **Act 44 of 2018.** This act established the Safe2Say Program and made omnibus school safety amendments to the Public School Code. The Safe2Say Program was created in response to school shootings, in order to promote communication between schools and law enforcement officials. The program involves a pathway for anonymous reporting concerning unsafe, potentially harmful, dangerous, violent or criminal activities, or the threat of such activities, in a school entity. The act designates the Office of the Attorney General to administer the program. The omnibus school safety amendments created the School Safety and Security Committee within the PA Commission on Crime and Delinquency, established the School Safety and Security Grant Program to allocate grant money to supplement existing school entity spending on school safety and security, and required school entities to provide employees with mandatory training on school safety and security. The omnibus amendments also included provisions that address School Police Officers and School Resource Officers, including provisions regarding definitions and descriptions. [Public School Code of 1949, Act of March 10, 1949, P.L. 30, No.14, as amended by the Act of Jun. 22, 2018, P.L. 327, No. 44 (“Act 44”), 24 P.S. §§ 1302-A, 13-1301-B-13-1310-B, 13-1301-C-1314-C, 13-1301-D-13-1307-D].

s. **Act 82 of 2018.** This act provides for special education teacher certification and a Joint State Government Commission study regarding which fields of teacher

certification are appropriate, along with the creation or elimination of certain teaching certifications or endorsements. [Public School Code of 1949, Act of March 10, 1949, P.L. 30, No.14, as amended by the Act of Oct. 19, 2018, P.L. 545, No. 82 (“Act 82”), 24 P.S. § 12-1202.1].

t. **Act 158 of 2018.** This act establishes pathways that are alternatives to the Keystone Exam graduation requirement for high school students. Among the alternative pathways are pathways that involve a satisfactory composite score on Keystone Exam components; a satisfactory score on an alternative assessment, such as the SAT, ACT, PSAT, or ASVAB; the attainment (for a CTE student) of an industry-based competency certification; or the exhibition of some “alternative evidence” of graduation readiness. [Public School Code of 1949, Act of March 10, 1949, P.L. 30, No.14, as amended by the Act of Oct. 24, 2018, P.L. 1146, No. 158 (“Act 158”), 24 P.S. § 1-121].

u. **Act 7 of 2019.** This act requires the Department of Education and Department of Health to develop or identify a model curriculum and guidelines for CPR instruction for public school students in grades 9-12. [Public School Code of 1949, Act of March 10, 1949, P.L. 30, No.14, as amended by the Act of Jun. 12, 2019, P.L. 31, No. 7 (“Act 7”), 24 P.S. § 15-1528].

v. **Act 16 of 2019.** This act made omnibus amendments to the Public School Code. The amendments set a date for the reconstitution of the Special Education Funding Commission, established that students must attend school for 80% of the school year in order to advance to the next grade, directed the Department of Education to post all public school budgets on its website, imposed a one-year moratorium on the Department accepting or approving new school building construction project applications, changed the compulsory school age of children from 8-17 to 6-18, authorized a student who owes more than \$50 for lunches to receive an

alternative meal until the balance is paid, established the Innovation Schools Program to study and evaluate innovative approaches to economically disadvantaged schools (including workforce development programs, mentoring services, before-school and after-school programs, prevention measures, and social wrap-around services), set a community college and library funding formula, and established that, for the Ready-to-Learn Block Grant, schools would receive at least the same amount that they received in prior years. [Public School Code of 1949, Act of March 10, 1949, P.L. 30, No.14, as amended by the Act of Jun. 28, 2019, P.L. 117, No. 16 (“Act 16”), 24 P.S. §§ 1-122, 2-221.3, 6-687, 7-732.1, 10-1003, 13-1326, 13-1337, 14-1408-A, 14-1401-B-14-1406-B, 19-1913-A, 20-2002-B, 20-2003-B-20-2006-B, 20-2009-B, 20-2001-J-20-2003-J, 21-2103, 22-2204-B, 23-2323, 25-2502.8, 25-2502.53, 25-2509.1, 25-2510.3, 25-2599.6-25-2599.8, 26-2601-K-26-2605-K].

w. **Act 18 of 2019.** This act created the Keystone Telepresence Education Grant Program to award grants to intermediate units for the purchase of telepresence equipment and related support services for the educational support of homebound students. It also addresses and defines the “trauma-informed approach” to education within the Commonwealth. Additionally, it calls for school safety and security enhancements. [Public School Code of 1949, Act of March 10, 1949, P.L. 30, No.14, as amended by the Act of Jun. 28, 2019, P.L. 146, No. 18 (“Act 18”), 24 P.S. §§ 1-102, 3-328, 9-923.3-A, 12-1205.1, 12-1205.7, 12-1207.1, 12-1217, 13-1302-A, 13-1301-B, 13-1302-B, 13-1305-B-13-1307-B, 13-1309-B-13-1311-B, 13-1306-D, 13-1307-D, 13-1301-E-13-1303-E, 14-1409, 15-1513-D, 15-1501-J-15-1508-J, 26-2603-B, 26-2604-B].

x. **Act 64 of 2019.** This act amended the Public School Code to allow school entities to use up to five flexible instruction days per school year. A school entity may use

a flexible instruction day if it is prevented from opening due to weather, disease epidemic, law enforcement emergency, damage to a school building, inoperability of school buses, or temporary circumstances that render any portion of a school building unfit or unsafe for use. [Public School Code of 1949, Act of March 10, 1949, P.L. 30, No.14, as amended by the Act of Jul. 2, 2019, P.L. 396, No. 64 (“Act 64”) 24 P.S. § 15-1506].

y. **Act 67 of 2019.** This act updated requirements related to school police officers, school resources officers, and school security guards, including requirements regarding training, powers and duties, and cooperative service agreements. [Public School Code of 1949, Act of March 10, 1949, P.L. 30, No.14, as amended by the Act of Jul. 2, 2019, P.L. 406, No. 67 (“Act 67”) 24 P.S. §§ 13-1301-C-13-1303-C, 13-1305-C, 13-1306-C, 13-1309-C, 13-1311-C, 13-1313-C-13-1315-C].

z. **Act 76 of 2019.** This act expanded the transfer and articulation of credits between institutions of higher education and school districts and calls for the provision of CTE-related information to students. It also established the Schools-to-Work Program in the Department of Labor and Industry to award competitive grants to support the establishment and enhancement of workforce development partnerships to create employment and training pathways. Additionally, the act required the Departments of Education, Labor and Industry, and Agriculture to establish a central online clearinghouse to provide the public with information about postsecondary pathways and options, career and technical education and workforce opportunities, and other career resources. [Public School Code of 1949, Act of March 10, 1949, P.L. 30, No.14, as amended by the Act of Oct. 30, 2019, P.L. 460, No. 76 (“Act 76”), 24 P.S. §§ 1-111, 1-111.1, 1-121, 1-126, 1-128, 2-218, 2-220, 2-221.2, 2-222, 3-322, 4-425, 5-502, 5-513, 5-522, 5-527, 5-528, 6-613, 6-602-B, 7-701.1, 7-772.1, 7-772.2, 7-776.1, 9-909-A, 9-914-A, 10-1089, 11-1101,

11-1113, 11-1123, 11-1141, 11-1142, 11-1142.1, 11-1144.1, 11-1145, 11-1146, 11-1164, 11-1166, 11-1176, 11-1183, 11-1195, 11-1101-A, 11-1101-B, 11-1105-B, 12-1201.1, 12-1204.1, 12-1204.2, 12-1205.1, 12-1205.2, 12-1205.4-12-1205.6, 12-1207.1, 12-1217, 13-1317.2, 13-1326, 13-1327, 13-1361, 13-1381, 13-1301-A, 13-1301-C, 13-1302-D, 14-1414.1-14-1414.5, 14-1423, 14-1424, 15-1505, 15-1506, 15-1517, 15-1526-15-1528, 15-1549, 15-1549.1, 15-1551, 15-1554, 15-1503-A, 15-1501-C, 15-1502-I, 16-1605, 16-1605.1, 16-1607, 16-1614, 16-1602-B, 16-1603-B, 16-1614-B, 16-1602-C, 17-1707, 17-1703-A, 18-1801-18-1811, 18-1840.1, 18-1841, 18-1842, 18-1842.1-18-1842.2, 18-1844, 18-1845, 18-1847, 18-1849, 18-1850.1-18-1850.4, 18-1851-18-1853, 18-1855, 18-1856, 18-1801-A-18-1806-A, 19-1922, 19-1925, 19-1901-A, 19-1905-A, 19-1913-A, 19-1908-B, 19-1901-C, 19-1901-D, 19-1903-D, 19-1901-E, 19-1901-F, 19-1906-G, 19-1907-G, 19-1901-H-19-1904-H, 20-2002-B, 20-2001-C, 20-2003-C-20-2006-C, 20-2001-H, 21-2110, 24-2401, 25-2501, 25-2502, 25-2502.6, 25-2502.8, 25-2506.1, 25-2507, 25-2508, 25-2508.1, 25-2508.3-25-2508.5, 25-2509.5, 25-2513.1, 25-2515, 25-2518, 25-2552.1, 25-2561-25-2563, 25-2574, 25-2574.2, 25-2574.3, 25-2575, 25-2577, 25-2578, 25-2593-25-2595, 25-2597.3-25-2597.5, 25-2599, 25-2599.1, 25-2599.2, 26-2604-B].

aa. **Act 91 of 2019.** This act amended the Public School Code to provide for the award of course credit for successful completion of coursework in personal finance during grades 9 through 12. It also amended the Public School Code’s provisions regarding School Police Officers, School Resource Officers, and School Security Guards. [Public School Code of 1949, Act of March 10, 1949, P.L. 30, No.14, as amended by the Act of Nov. 27, 2019, P.L. 662, No. 91 (“Act 91”) 24 P.S. §§ 13-1301-C, 13-1302-C, 13-1306-C, 13-1313-C, 13-1314-C, 16-1605, 20-2001-I, 26-2602-K].

bb. **Act 13 of 2020.** To deal with COVID-19, this act revised the educator evaluation system and put in place certain emergency provisions. These emergency provisions, among other things, eliminated the 180 school day requirement for all schools and home education programs and authorized the Secretary of Education to order the closure of public schools, waive program-hours requirements, waive performance data in relation to teacher evaluations, waive the 12-week student-teaching requirement, increase the number of allowable flexible instruction days, and waive timelines for applying to participate in flexible instruction days. For school employees, the act also guaranteed pay and guaranteed that there would not be a loss in credits or change in contributions for PSERS. [Public School Code of 1949, Act of March 10, 1949, P.L. 30, No.14, as amended by the Act of Mar. 27, 2020, P.L. 62, No. 13 (“Act 13”), 24 P.S. §§ 11-1123, 11-1125.1, 11-1138.1-11-1138.16, 15-1501.8].

cc. **Act 30 of 2020.** This act made omnibus amendments to the Public School Code. The amendments provided for the reconstitution of the Basic Education Funding Commission on July 1, 2022 and extended the time for the Special Education Funding Commission’s report to be issued. The amendments also called for disaster emergency school health and safety grants to be funded. [Public School Code of 1949, Act of March 10, 1949, P.L. 30, No.14, as amended by the Act of Jun. 5, 2020, P.L. 223, No. 30 (“Act 30”), 24 P.S. §§ 1-122, 1-123, 6-689, 7-732.1, 13-1306-B, 13-1312-B, 13-1313-B, 15-1501.9, 19-1913-A, 19-1917-A, 19-1905-G, 20-2001-I, 23-2324, 25-2502.53, 25-2509.1, 25-2509.5, 25-2510.3, 25-2541, 25-2596, 26-2608-J].

dd. **Act 84 of 2020.** This act requires each school district to establish and publish on its website an email address for each of its school directors and, for each charter school, to publish an email address for each member of its board of trustees. [Public School Code

of 1949, Act of March 10, 1949, P.L. 30, No.14, as amended by the Act of Oct. 29, 2020, P.L. 722, No. 84 (“Act 84”), 24 P.S. §§ 3-329, 17-1716.1-A].

ee. **Act 136 of 2020.** This act established COVID-19-related temporary certification flexibility. It also delayed the use of proficiency on the Keystone Exams as a graduation requirement until the 2022-2023 school year. And it provided for nonpublic school transportation activities for the 2020-2021 school year. [Public School Code of 1949, Act of March 10, 1949, P.L. 30, No.14, as amended by the Act of Nov. 25, 2020, P.L. 1294, No. 136 (“Act 136”), 24 P.S. §§ 1-121.1, 1-122, 12-1202.1, 12-1207.4, 13-1361.1, 15-1501.8, 20-2006-B].

ff. **Act 26 of 2021.** This act made omnibus amendments to the Public School Code. The omnibus amendments established a community college funding formula and extended deadlines for the work of the Special Education Funding Commission and Public Higher Education Funding Commission. They also authorized college student-athletes to earn compensation for the use of their names, images, or likenesses. [Public School Code of 1949, Act of March 10, 1949, P.L. 30, No.14, as amended by the Act of Jun. 30, 2021, P.L. 158, No. 26 (“Act 26”), 24 P.S. §§ 1-122, 7-732.1, 19-1913-A, 19-1917-A, 20-2001-I, 20-2001-K-20-2009-K, 23-2325, 25-2502.53, 25-2509.1, 25-2510.3, 26-2608-J].

gg. **Act 66 of 2021.** This act authorizes students, for the 2021-22 school year, to repeat a grade level, if they so choose, because of the disruptions that COVID-19 caused. [Public School Code of 1949, Act of March 10, 1949, P.L. 30, No.14, as amended by the Act of Jun. 30, 2021, P.L. 353, No. 66 (“Act 66”), 24 P.S. §§ 13-1383, 15-1501.10].

IV. FUNDING PENNSYLVANIA’S SYSTEM OF PUBLIC EDUCATION

A. Statutory System For Funding Education In Pennsylvania

186. Public education throughout the United States, including Pennsylvania, is funded through a partnership of state, local and federal governments, with the majority of revenue coming from state and local sources. [11/18/21 N.T. at 1144 (Kelly)].

187. Using both state and local revenues to fund education is a long-standing practice both in Pennsylvania and across the United States. Indeed, Pennsylvania has used both state and local taxes to fund education since the 1800s. [11/18/21 N.T. at 1144 (Kelly)].

188. Although the precise share of state funds to local funds comprising the non-federal portion of the funding varies from year-to-year and district-to-district, Pennsylvania’s current ratio of state to local funding approximates what was in effect 200 years ago. *William Penn II*, 170 A.3d at 421, n.9.

189. The General Assembly has passed numerous appropriations statutes that provide for the support of Pennsylvania’s public school system. Most of these statutes are located in the Pennsylvania Public School Code (“School Code”).

190. The General Assembly regularly reviews and revises the statutory system for funding public education. Typically, every year with the enactment of the budget, the School Code is amended and some of those amendments relate to issues regarding school funding. [2/3/22 N.T. at 11616–20 (Donley)].

191. State appropriations for funding of public education authorized by the General Assembly and included in the most recent Commonwealth budget include Basic Education Funding; Special Education Funding; state contribution into the Public School Employees’ Retirement System (“PSERS”); funding for career and technical education; PlanCon school construction funds (referred to in the budget as “Authority Rentals and Sinking Fund

Requirements”); funding for Early Intervention programming for children below school age; Pre-K Counts funding and Head Start supplemental assistance; and Ready-to-Learn Block Grants [2/3/22 N.T. at 11613-17, 11631-32 (Donley); LR-01548].

192. The General Assembly has also enacted tax credit programs, such as the EITC and OSTC programs, which allow businesses to make contributions to qualified educational organizations and claim a tax credit in connection with those contributions. [2/2/22 N.T. at 11365-67 (Anderson)].

193. In addition to authorizing appropriations for public education, the General Assembly regularly enacts statutes that provide for the distribution of Basic Education Funding. These statutes are also found in the School Code. Because Basic Education Funding is paid to school districts as a reimbursement of past expenses, the sections of each fiscal year’s School Code that relate to Basic Education Funding are drafted to refer back to the previous school year, for which the reimbursement is being provided. [2/7/22 N.T. at 12104–05 (Hanft); 2/3/22 N.T. at 11637 (Donley)].

194. For example, Section 2502.47, which is entitled “Basic Education Funding for the 2006-2007 school year, SY” applies to Basic Education Funding paid to school districts in the 2007-08 fiscal year. [2/3/22 N.T. at 11638 (Donley); see also 2/7/22 N.T. at 12113-14 (Hanft)].

195. Section 2502.48 of the School Code, entitled “Basic Education Funding for Student Achievement,” was added on July 9, 2008 and made retroactive to July 1, 2008. 24 Pa.C.S. §25-2502.48. Subsection (b) required the Department of Education to calculate an adequacy target for each school district. [2/3/22 N.T. at 11639 (Donley)]. The adequacy targets were derived from the APA Costing Out Study. [2/3/22 N.T. at 11639-40 (Donley)].

196. The PDE's Division of Subsidy Administration is responsible for performing the calculations necessary to make State payments to school districts. [2/7/22 N.T. at 12094-95 (Hanft)]. In performing such calculations, PDE reviews the relevant enabling legislation and calculates distributions and allocations according to that legislation. [2/7/22 N.T. at 12185 (Hanft)].

197. Benjamin Hanft, PDE's Division Chief for Subsidy Administration, testified as the PDE's designee on school finance. [2/7/22 N.T. at 12094 (Hanft)]. Mr. Hanft testified that PDE's Division of Subsidy calculated adequacy targets for only three school years, including for the 2007-2008, 2008-2009, and 2009-2010 school years, before they were taken out of the School Code. [2/7/22 N.T. at 12110–12117, 12127 (Hanft)]; 2/3/22 N.T. at 11640, 11645 (Donley).

198. The “State funding targets” calculated under Section 2502.48(c) were not the amounts of the subsidies paid to school districts. The subsidies were subject to modifications under Section 25-2502.48(d) and (e).

199. Mr. Donley testified that adequacy targets were taken out of the School Code by the General Assembly because they were deemed too expensive in light of the Commonwealth's financial circumstances at the time. [2/3/22 N.T. at 11645 (Donley)].

200. Section 2502.50 of the School Code, which is entitled “Basic education funding for the 2010-2011 school year” and applies to the 2011-2012 fiscal year, does not require PDE to calculate an adequacy target. [2/7/22 N.T. at 12116 (Hanft)].

201. In 2016, Pennsylvania adopted Act 35 of 2016, which is colloquially known as the “Fair Funding Formula.” Act 35 is codified in Section 2502.53 of the School Code. [2/3/22

N.T. at 11647–48 (Donley)]. The Fair Funding Formula will be discussed in greater detail in Section IV.E, *infra*.

202. With the exception of the 2020-21 fiscal year (the 2019-20 school year), when Basic Education Funding remained flat due to the uncertainty surrounding the COVID-19 pandemic, the amount of funding that has passed through the Act 35 funding formula has increased every year since its enactment. [2/3/22 N.T. at 11648–51 (Donley)].

203. Although Petitioners have alleged generally that the school funding system established by the General Assembly violates the Education Clause and the Equal Protection Clause, Petitioners have not identified any particular statute that they believe to be unconstitutional.

B. Total Amount of Education Funding In Pennsylvania

204. PDE collects, maintains and publishes data regarding annual revenues and expenditures received by Pennsylvania school districts and other Local Education Agencies (“LEAs”).⁵ Among other things, PDE maintains and posts on its website an Excel spreadsheet known as an Annual Financial Report (“AFR”) Revenues file. The AFR Revenues spreadsheet includes state, local and federal revenues as self-reported by each LEA. [Parties’ Joint Designations of the 7/8/20 Deposition of Benjamin Hanft (hereinafter, “Hanft 7/8/20 Dep. (Vol. 2)”) at 68:18-69:23]. The most recent AFR data available as of the time of trial was for 2019-20.

205. In the 2019-20 fiscal year, the total revenue to Pennsylvania school districts from all sources was approximately \$33.01 billion. [PX-02135, Tab 1, Line 752]. This represented an increase from approximately \$27.58 billion in 2014-15. [PX-02130, Tab 1, Line 752].

⁵ LEAs include both school districts and charter schools. [See generally 12/20/21 N.T. at 5706 (Pryzwara)].

206. Pennsylvania uses Average Daily Membership (“ADM”) to compute per pupil spending. ADM can be viewed as the number of students who were residents of the school district in the previous year. [Parties’ Joint Designations of the 7/7/20 Deposition of Benjamin Hanft (hereinafter, “Hanft 7/7/20 Dep. (Vol. 1)”) at 55:18-56:1].

207. In 2019-20 school year, total revenue per ADM on a statewide basis was \$19,224. [PX-02135, Tab 3, Line 503]. This was an increase from total revenue per ADM of \$15,965 in 2014-15. [PX-02130, Tab 3, Line 503].

208. Between 1981 and 2020, education funding in Pennsylvania has almost tripled. [2/14/22 N.T. at 13321 (Eden)]. Nationally, over the past 60 years, expenditures per-pupil have quadrupled in real terms even after adjusting for inflation. [02/17/2022 N.T. at 14295 (Hanushek)]. Unfortunately, these large spending increases have not led to concrete results as far as improving student achievement or addressing the achievement gap. [02/17/2022 N.T. at 14295 (Hanushek); 1/21/22 N.T. at 9950 (Johnson)].

209. Data from the National Center for Education Statistics (“NCES”) shows that Pennsylvania spent \$5,679 per pupil in 2020-21 adjusted dollars in 1969, just a few years after the adoption of the current version of the Education Clause. In 2018-19, that number had increased to \$17,551 in 2020-21 adjusted dollars.⁶ The national average over the same period and using the same inflation adjustments increased from \$5,233 to \$13,701.

210. According to the 2019 U.S. Census data, Pennsylvania ranks sixth out of the U.S. states in overall funding, including from federal, state, and local sources, for kindergarten through twelfth grades. These results include Washington D.C. as a “state,” and report it as the highest spending state in America in overall education spending. Therefore, U.S. Census data

⁶ The Court found that it could take judicial notice of NCES data. The specific NCES data cited in this paragraph is available at https://nces.ed.gov/programs/digest/d21/tables/dt21_236.65.asp.

would rank Pennsylvania as the fifth highest state in education spending per student if D.C. were not included as a state. [2/14/22 N.T. at 13328–29 (Eden)].

211. Petitioners’ expert witness, Dr. Matthew Kelly (“Dr. Kelly”), argued that the U.S. Census data is misleading because the Census data double-counts certain dollars by failing to properly account for charter school students in the state per-pupil counts. [2/22/22 N.T. at 14465–66, 14478 (Kelly)].

212. Dr. Kelly did not attempt to determine where Pennsylvania would rank if adjustments were made to account for this alleged double counting. [2/22/22 N.T. at 14578-79 (Kelly)]. Additionally, in calculating what he purported to be Pennsylvania’s total revenue per ADM, Dr. Kelly did not account for the federal funding that is given directly to the Commonwealth’s charter schools. [2/22/2 N.T. at 14576–77 (Kelly)].

213. Dr. Kelly acknowledged that even if Pennsylvania’s per pupil spending numbers were revised downward to account for the alleged double counting, and the spending figures for every other state were left the same, Pennsylvania would still rank as the 15th highest spending state in the country in per-pupil spending on K-12 education. [2/22/22 N.T. at 14579 (Kelly)].

214. Dr. Kelly also acknowledged that data from the National Center for Education Statistics (“NCES”), which is federal data coming from the Census of Government Finances, uses the correct Pennsylvania pupil enrollment count (*i.e.* it appropriately accounts for charter school students) and indicates that, as of 2017-18, Pennsylvania’s per-student expenditure on public education was about \$4,000 per student higher than the national average. [2/22/22 N.T. at 14557-60, 14478 (Kelly); LR-02345-00015].

215. NCES also data indicates that Pennsylvania is in the top 10 states nationally in per-pupil education spending (not including Washington D.C.). [LR-02345-00015 to 00016].

216. Furthermore, the same NCES data indicates that while eight states had greater expenditures per pupil than did Pennsylvania, among those states, Pennsylvania had the second highest percent increase in per pupil spending from 2017 to 2018. [LR-02345-00015 to 00016]. This means that Pennsylvania's year-to-year percent increase in education spending exceeds that of all but one state that currently outspends Pennsylvania.

217. In the NCES November 2021 publication, Revenues and Expenditures for Public Elementary and Secondary School Districts: FY 19, Pennsylvania ranks 13th among all states in the nation in current expenditures per pupil in "high-poverty districts" at \$15,881 per pupil.⁷ The national average for per pupil expenditures in high-poverty districts is \$13,080 per pupil.

218. Legislative Respondents presented the expert testimony of Jason Willis from WestEd, a national nonpartisan research development and technical assistance agency that supports states, local, and regional entities and school districts to improve the way they deliver services to children, most notably, public education. [2/10/22 N.T. at 12671 (Willis)]. In his five years with WestEd, Mr. Willis has worked with well over a dozen-and-a-half states and dozens more school districts across the country to help those entities rethink how they use resources in the context of serving children. Recently, Mr. Willis has worked with states such as California, Maryland, North Carolina, Kansas, Arkansas, New Mexico, Nevada, Utah, and Delaware. [2/10/22

⁷ The NCES November 2021 publication, Revenues and Expenditures for Public Elementary and Secondary School Districts: FY 19 is available at <https://nces.ed.gov/pubs2021/2021304.pdf>. The cited information is on pages 24 – 25 in a table entitled "Current expenditures per pupil of public elementary and secondary school systems, by poverty quartile and state: Fiscal year 2019."

N.T. at 12675-76 (Willis)]. Prior to working at WestEd, he served as Assistant Superintendent with the San Jose Unified School District. [2/10/22 N.T. at 12671–72 (Willis)].

219. At WestEd, Mr. Willis has, among other things, engaged in state comparative analyses, comparing the finance systems or a portion of the finance system of his client’s state to other states. [2/10/22 N.T. at 12679 (Willis)].

220. Based on his expert analysis in this case, Mr. Willis disagreed with the Petitioners’ characterization that “Respondents have adopted an irrational and inequitable school financing arrangement that drastically underfunds school districts across the Commonwealth.” Mr. Willis testified that over the course of the past five to six years, it is clear that Pennsylvania is aiming to address issues of inequitable distribution of funding. Additionally, Pennsylvania’s investment in public education, as compared to many of its peer states, is substantially higher than many of the other states in the country. [2/10/22 N.T. at 12702-04 (Willis)].

221. WestEd compiled an exhibit showing six year per pupil expenditures in Pennsylvania and its peer states for years 2011 to 2016, adjusted for 2019 dollars. Of the peer states, Pennsylvania ranks third with \$15,452 per pupil. The lowest peer is Texas with \$9,706 per pupil. [2/10/22 N.T. at 12788-89 (Willis); LRD1-00010].

222. As part of its analysis, WestEd identified a group of eight states that were selected as peer states based on a three-step analysis consisting of the following: (1) identifying all states that border Pennsylvania and looking at significant characteristics of each, including the percentage of population living in rural and urban areas; (2) looking at states with similar student enrollment and enrollment patterns; and (3) applying a statistical technique known as the “coefficient of variation,” in which it looks at the concentration of similar data such as family

income, high school graduation rate, preschool enrollment, kindergarten enrollment, outcome measures and adult educational attainment. [2/10/22 N.T. at 12771-75, 12778-79 (Willis)]

223. From this three-step analysis, Mr. Willis identified Pennsylvania's peer group as, Delaware, Maryland, New York, Ohio, Michigan, Illinois, Arkansas and Texas. [2/10/22 N.T. at 12780 (Willis)].

224. On cross-examination, Petitioners' questioned Mr. Willis's inclusion of certain states (*e.g.* Arkansas) and exclusion of others (*e.g.* New Jersey). Mr. Willis explained the reasoning behind these choices. New Jersey is not included primarily because over 90% of its population resides in an urban center, which is significantly different from Pennsylvania and other peer states. [2/10/22 N.T. at 12776 (Willis)]. Arkansas was included based on the coefficient of variable analysis, which demonstrated numerous similarities between Pennsylvania and Arkansas. [2/10/22 N.T. at 12775-76 (Willis)]. Mr. Willis further explained that in his prior analysis conducted for the State of Arkansas, Pennsylvania was not selected as a peer state because WestEd was engaged by the Arkansas Legislature, which "had a very strong feeling who those peer states would be." [2/11/22 N.T. at 13162-63 (Willis)].

225. WestEd compiled an exhibit based on NCES data showing six year per pupil expenditures in Pennsylvania and its peer states for years 2011 to 2016, adjusted for 2019 dollars. Of the peer states, Pennsylvania ranks third with \$15,452 per pupil. The lowest peer is Texas with \$9,706 per pupil. [2/10/22 N.T. at 12788-89 (Willis); LR-02087-00015].

226. Although Petitioners have contended that national data fails to take into account differences in cost-of-living, none of the Petitioners' experts or fact witnesses prepared any alternative calculations taking into account any cost-of-living adjustments.

227. Although Petitioners have argued that national spending comparisons are not probative, Petitioners’ own experts have repeatedly sought to draw comparisons between Pennsylvania and other states in both funding and academic measures. [11/18/21 N.T. at 1317–18 (Kelly) (using U.S. Census data to argue that Pennsylvania ranked among the bottom of states in percentage of state versus local funding); 1/21/22 N.T. at 9660-61 (Johnson) (characterizing Pennsylvania, prior to enactment of Act 35, as one of three states in the country without a consistent school funding formula designed to equalize funding disparities between districts); 01/13/2022 N.T. at 8419 (Noguera) (purporting to compare Pennsylvania to other states in terms of quality of educational opportunity)].

228. Mr. Willis does not agree with the characterization that “Respondents have adopted an irrational and inequitable school financing arrangement that drastically underfunds school districts across the Commonwealth,” in part because over the course of the past five to six years, it is clear that Pennsylvania is aiming to address issues of inequitable distribution of funding. Additionally, Pennsylvania’s investment in public education, as compared to many of its peer states, is substantially higher than many of the other states in the country. [2/10/22 N.T. at 12702-04 (Willis)].

229. Based upon all of the evidence presented in this case, the Court finds that Pennsylvania’s overall level of spending on public education is high in comparison to other states and to the national average, and that Pennsylvania compares favorably to its peer states in its financial commitment to public education.

230. The Court further finds that Pennsylvania’s high level of financial commitment to public education in comparison to its peer states is probative as to whether the funding system established by the General Assembly is reasonably related to the fulfillment of its

constitutional duties under the Education Clause, and distinguishes Pennsylvania from some other states, such as North Carolina, whose education funding systems have been deemed unconstitutional. [2/11/22 N.T. at 13001—02 (Willis) (noting that North Carolina funded its schools at about 55 percent of the average per-pupil rate of funding in Pennsylvania)].

C. The Commonwealth's Budget and State Education Funding

231. Mr. Donley testified that in his role as Republican Staff Executive Director for the Pennsylvania House Appropriations Committee, he oversees a budget writing committee and reviews bills that pass through the House of Representatives to cost out fiscal notes. [2/3/22 N.T. at 11572–73 (Donley)]. Additionally, from 1995 through 2012, when he assumed his current position, Mr. Donley worked in the Pennsylvania Governor's Budget Office, during which time he worked under multiple gubernatorial administrations. [2/3/22 N.T. at 11575–76 (Donley)].

232. Mr. Donley testified regarding a variety of budget-related topics, including Pennsylvania's annual budget process; state and local appropriations for public education as authorized by the General Assembly; and other items funded through Pennsylvania's budget, aside from preK-12 education. Mr. Donley also testified regarding other recent laws enacted by the Pennsylvania General Assembly, which pass through the House Appropriations Committee.

233. In light of Mr. Donley's extensive experience working with State budgets, the Court found his testimony helpful to its understanding of these topics.

234. The Commonwealth's fiscal year runs from July 1st through June 20th of the following year. [2/3/22 N.T. at 11585 (Donley)].

235. The Commonwealth's annual budget process typically begins in the August preceding the fiscal year, during which the Governor's Budget Office issues budget instructions to the agencies. [2/3/22 N.T. at 11586 (Donley)]. In response, the agencies, led by each agency's fiscal director, submit budget requests to the Governor's Budget Office for review and

consideration. [2/3/22 N.T. at 11586 (Donley)]. The Governor's Budget Office then reviews all of the agencies' requests, compiles its proposed executive budget for the upcoming fiscal year, and presents this proposed budget to the General Assembly and public. [2/3/22 N.T. at 11585–86 (Donley)].

236. After the Governor's proposed executive budget is published, the Commonwealth's House and Senate Appropriations Committees conduct a series of public hearings, during which the Governor's cabinet members testify with regard to the Governor's proposed executive budget. [2/3/22 N.T. at 11585, 11587 (Donley)].

237. These hearings also serve as an opportunity for various House and Senate Appropriations Committee members to voice their opinions on the proposed budget. [2/3/22 N.T. at 11587–88 (Donley)]. Additionally, members of the public can voice their opinions regarding various line items in the proposed budget, including the public education budget. [2/3/22 N.T. at 11588 (Donley)].

238. After these budget hearings, and once there is a better understanding of the Commonwealth's revenue from corporate and personal income taxes for the year, budget negotiations ensue, with the hope of having a finalized budget in place before the start of the fiscal year on July 1. [2/3/22 N.T. at 11588–89 (Donley)].

239. On occasion, the Governor and the General Assembly are unable to agree upon a final budget by the start of the fiscal year. For instance, the 2015-16 budget enacted by the General Assembly was vetoed by Governor Wolf, and a final budget was not in place until March 2016. However, in more recent years, the budget negotiations have been successful and Pennsylvania's Governor has signed the final budget that has been passed by the General Assembly. [2/3/22 N.T. at 11589-90 (Donley)].

240. The budgets passed by Pennsylvania’s General Assembly during Governor Wolf’s administration reflect the Commonwealth’s sustained investments in education. [2/7/22 N.T. at 12176 (Hanft)]. Those budgets also reflect an effort to improve education opportunities for every student across the state, regardless of zip code. [Parties’ Joint Designations of the 7/8/20 Deposition of Benjamin Hanft (hereinafter, “Hanft 7/8/20 Dep. (Vol. 2)” at 53:6–13].

241. The total enacted budget in Pennsylvania for the 2021-2022 fiscal year was \$38,584,580,000. [2/3/22 N.T. at 11593 (Donley); LR-01809-00012].

242. Of the total state budget amount, nearly \$14 billion was apportioned to the Department of Education, which is the Commonwealth’s second largest line item apportionment on its budget, trailing only that of the Department of Human Services. This \$14 billion budget for the Department of Education includes funding for some aspects of higher education beyond the high school level. [2/3/22 N.T. at 11597, 11608, 11629 (Donley); LR-01809-00004].

243. The 2021-2022 school year budget under the Support for Public Schools category is over \$12.648 billion. Unlike the General Fund Tracking Run budget figures, the Support for Public School funds do not include lines items for higher education beyond the high school level. [2/3/22 N.T. at 11629–30 (Donley); LR-01548].

244. PDE administers and distributes various state and federal funding programs for public education in Pennsylvania, including basic education state funding (the largest allotment), state special education funding, state assessment funding, state career and technical education funding, and migrant education funding. [Parties’ Joint Designation of the 3/11/2020 Deposition of Matthew Stem (hereinafter, “Stem Dep.”) at 14:2 to 15:3; 12/1/21 N.T. at 2040 (Stem)].

245. The state funding for special education includes early intervention programs for students before they begin kindergarten. [Stem Dep. at 28:11 to 29:6]. It is administered to students that are in need of specially designed instruction related to a developmental delay or another issue that may impair their learning and development. [Stem Dep. at 171:23 to 172:6]. Administration of the early intervention programs is one of the primary functions of the state's IUs, which case manage and either provide services directly to the student or coordinate such services by contracting with third parties. [Stem Dep. at 173:11 to 174:6].

246. Pennsylvania also provides ready-to-learn block grants to school districts, which are funds targeted to certain student needs. [12/1/21 N.T. at 2040-2041 (Stem)]. There is an enumerated list of acceptable statutory and regulatory uses for such grants, including reducing class size, providing additional technology instruction, and professional development for teachers. [Stem Dep. at 21:3 to 21:16]. Approximately \$6 million is allocated annually for professional development programs for administrators and teachers. [Stem Dep. at 24:14 to 24:23; 25:1 to 26:3].

247. The PDE administers funding for IUs, tuition for orphans and children placed in private homes, and funding to educate children of migrant workers. [12/1/21 N.T. at 2041-2042 (Stem)].

248. In addition, PDE administers funding for schools for the deaf and blind, school food services, and contributions to retirement benefits and social security for teachers and school employees. [12/1/21 N.T. at 2042 (Stem)].

249. PDE also provides subsidies to school districts for student transportation, as well as funding to financially distressed districts for systems-level improvements and additional supports. [Stem Dep. at 26:4 to 26:7; 27:19 to 28:2].

250. PDE administers funding for “Pre-K Counts,” which is an early childhood education program that targets students in poverty and high-need students to prepare them to be successful in kindergarten and beyond. [12/1/21 N.T. at 2042-2043 (Stem)]. Through Pre-K Counts, three- and four-year-olds start learning basic academic skills (reading and writing) and start to learn socially through a focus on social-emotional learning and engaging families in child development. [Stem Dep. at 22:11 to 22:25]. Mr. Stem testified at his deposition that the Pre-K Counts program provides “quality early learning experiences for students that are not yet of kindergarten age.” [Stem Dep. at 169:17 to 169:21].

251. PDE also administers funding for early intervention services for students up to age five who exhibit potential disabilities. [12/1/21 N.T. at 2043 (Stem)].

252. Basic Education Funding allocated by the General Assembly in the 2021-22 budget was \$7.066 billion. [2/3/22 N.T. at 11630 (Donley); LR-01548]. This amount includes approximately \$500 million in state contribution to social security funds, which used to be captured as a separate line item appropriation. [2/7/22 N.T. at 12138 (Hanft); LR-01548, fn. (a)]. Without including the social security contribution, BEF is about \$6.5 billion for the 2021-22 school year.

253. BEF for the 2021-2022 fiscal year increased by \$300 million from the previous year. This included \$100 million of Level Up Funding and an additional \$200 million to be distributed through the Fair Funding Formula. Level Up Funding was a supplemental allocation made to 100 districts based upon the Fair Funding Formula. This additional funding is recurring and will become part of those school districts’ base allocation after the 2021-22 fiscal year. [2/7/22 N.T. 12139-40 (Hanft); *see also* 11/19/21 N.T. at 1408–09 (Kelly); 2/3/22 N.T. at 11621–22 (Donley); LR-01581; 12/2/22 N.T. at 2484 (Stem)].

254. Other state education funding allocations in the 2021-2022 budget, included, for example:

- a. \$288 million to the Ready to Learn Block Grant,
- b. \$242 million for the Pre-K Counts Program,
- c. \$69.178 million for the Head Start Supplemental Assistance,
- d. \$99 million for Career and Technical Education,
- e. \$201 million in authority Rentals and Sinking Fund Requirements,

through which the Commonwealth participates in school construction projects with districts through the planning Construction Workbook (“PlanCon”) Program,

- f. \$1.236 billion for Special Education,
- g. \$2.7 billion for the School Employees’ Retirement.

[2/3/22 N.T. at 11631–36 (Donley); LR-01548].

255. Between the 2014-2015 and 2021-2022 school years, the Commonwealth has increased its total budget of spending on public education by over \$3.325 billion, or roughly 31.36%. [2/3/22 N.T. at 11658 (Donley)].

256. Prior to the adoption of the budget for the 2021-22 fiscal year, the Commonwealth had increased Basic Education Funding by \$800 million; special education by \$140 million; and career and technical education by \$40 million. [01/18/2022 N.T. at 8825 (Ortega); LR-01724].

257. In addition to the \$300 million increase in Basic Education Funding, the 2021-2022 budget included the following funding increases: \$50 million for special education funding; \$30 million for early education; \$20 million for Ready to Learn, a block grant project for schools; and \$11 million for preschool early intervention. [01/18/2022 N.T. at 8836 (Ortega)].

258. Pre-kindergarten and early childhood learning have been a recent focus of the Commonwealth's funding efforts. From 2015 to 2019, Pennsylvania's funding of pre-kindergarten programs increased by \$145 million. During that period, Pennsylvania's funding for pre-kindergarten programs more than doubled overall. [12/16/21 N.T. at 4912 (Campanini)].

259. For each year since 2015, Pennsylvania has allocated more state funding to Pre-K Counts and Head Start Supplemental Assistance Programs than it did in the prior year. [12/16/21 N.T. at 4955 (Campanini)].

260. In the 2016–17 school year, the Commonwealth's budget for Pre-K Counts was approximately \$147 million and the budget for Head Start Supplemental was approximately \$49 million. Today, the Commonwealth's budget for Pre-K Counts is approximately \$242 million and the budget for Head Start Supplemental is \$69 million. [12/16/21 N.T. at 4999–5004 (Campanini); LR-00511].

261. Secretary Ortega testified that PDE would like to see even more increased funding for education, but acknowledged that "it's probably true" that every state agency would likely say they want to see better funding for their particular area. [01/18/2022 N.T. at 8824 (Ortega)].

262. Notwithstanding PDE's desire for additional funding, Secretary Ortega confirmed PDE's position that "as a result of the increased investments that the current administration has made working with the General Assembly, Pennsylvania has made important strides in its efforts to ensure every Commonwealth student is college-, career- and community-ready." [01/18/2022 N.T. at 8827 (Ortega); LR-01724].

263. Thus, while there were differences between the Governor's proposed budgets and the budget that was actually approved, PDE supported the budget that was actually

enacted by the General Assembly for the year 2021-2022. [01/18/2022 N.T. at 8881-82 (Ortega); LR-01724-00003; LR-01613].

264. The Commonwealth's budget must be used to fund many important state priorities in addition to education. If the Commonwealth wanted to increase its state funding for Pre-K through twelfth grade education, the state would have to reduce spending elsewhere and/or raise its revenue by raising tax rates for personal and corporate taxes. [2/3/22 N.T. at 11610–11 (Donley)].

265. Of the total state budget for 2021-2022, over \$16 billion is apportioned to the Department of Human Services, which covers the funding of Medicaid, medical assistance, the state's long-term managed healthcare program, and the County Child Welfare program, which supports counties in helping abused and neglected children. [2/3/22 N.T. at 11599, 11604-05 (Donley); LR-01809-00008].

266. The Commonwealth's apportionment of funds to the Department of Education and Department of Human Services collectively comprise about 80% of the Commonwealth's General Fund budget. [2/3/22 N.T. at 11608 (Donley); LR-01809-00001].

267. Other items funded through the Commonwealth's budget, including amounts allocated in the 2021-22 fiscal year, include:

268. Roughly \$6.7 million was apportioned for the Governor's Office. [2/3/22 N.T. at 11594 (Donley); LR-01809-00001].

269. Over \$182 million for the Executive Offices, which includes the Office of Administration, Office of the State Inspector General, Workers' Compensation Security Fund Loan Repayment, Commission on Crime and Delinquency, Juvenile Probation Services, and a number of other agencies. [2/3/22 N.T. at 11594 (Donley); LR-01809-00001].

270. Over \$1.2 billion is apportioned to the Department of Treasury, including for the General Obligation Debt Service, which covers the debt service on bonds that are issued to pay for capital projects in the Commonwealth, new buildings, and major renovations and repairs around the state. [2/3/22 N.T. at 11595 (Donley); LR-01809-00002].

271. Over \$174 million is apportioned to the Department of Agriculture, which covers grants and subsidies to various programs like the State Food Purchase and to the University of Pennsylvania's Veterinary Activities and Center for Infectious Disease. [2/3/22 N.T. at 11595–96 (Donley); LR-01809-00002].

272. Over \$193 million to the Department of Community and Economic Development, which covers various economic development and incentive programs, including for marketing to attract tourists and businesses, the Office of Open Records, and for infrastructure and facilities improvement grants. [2/3/22 N.T. at 11596 (Donley); LR-01809-00002 to 00003].

273. Over \$2.6 billion to the Department of Corrections, which covers the costs to operate the state's correctional facilities. [2/3/22 N.T. at 11596 (Donley); LR-01809-00003].

274. Appropriations for the operation of state universities, including Pennsylvania State University (over \$268 million), University of Pittsburgh (over \$154 million), Temple University (over \$158 million), and Lincoln University (over \$15 million). [2/3/22 N.T. at 11597 (Donley); LR-01809-00004 to 00005].

275. Over \$169 million is apportioned to the Department of Environmental Protection. [2/3/22 N.T. at 11598 (Donley); LR-01809-00006].

276. Funding for other Commonwealth Departments include over \$160 million to the Department of Military and Veterans Affairs, over \$192 million to the Department of Revenue, over \$35 million to the Department of State, nearly \$3 million to the Department of

Transportation, over \$462 million to the Department of State Police, and over \$13 million to the Emergency Management Agency. [2/3/22 N.T. at 11605–07 (Donley); LR-01809-00008 to 00009].

277. Over \$355 million is apportioned for funding for the Pennsylvania judiciary, including the Supreme Court, Superior Court, Commonwealth Court, Courts of Common Pleas, Magisterial District Justices and Philadelphia Municipal Courts. [2/3/22 N.T. at 11607 (Donley); LR-01809-00010 to 00011].

D. Local Education Funding

278. In addition to state appropriations, the General Assembly has enacted a number of statutes that have enabled local school districts to impose taxes in order to fund their public schools. [2/3/22 N.T. at 11616–17 (Donley)]. These statutes are divided up based on the different district sizes. [2/3/22 N.T. at 11618 (Donley)].

279. In addition to property taxes, local school districts are authorized to impose other types of local taxes such as earned income taxes and per capita taxes [2/3/22 N.T. at 11619–20 (Donley)].

280. Compared to other states, Pennsylvania schools receive a high proportion of their funding from local taxes. However, as Mr. Willis explains, this does not mean that Pennsylvania provides low levels of state funding. [LRD1-11]. In his expert opinion, and the Court agrees, looking just at local funding compared to state funding is not a meaningful factor in considering Pennsylvania’s commitment to education because it has no bearing on academic achievement overall or among student groups among the peer states that he analyzed. [2/10/22 N.T. at 12791-92 (Willis); LRD1-00011].

281. Based on NCES data from 2015-2016, Pennsylvania compares favorably to its peer states in Total Per-Pupil Revenues, only behind New York and Maryland. Pennsylvania

is in the middle of the pack in how it compares in just State Revenue Per Pupil to its peer states. [2/10/22 N.T. at 12791- 92 (Willis)].

282. Relative to its peer states, Pennsylvania tends to rely less on property taxes as a source of local revenue. The significance of this is that local property taxes can create wealth disparities between communities. Allowing districts to raise revenue from other types of local sources gives districts the ability to raise additional money from other local sources. [2/10/22 N.T. at 12793-94 (Willis)].

E. Use of State Education Appropriations to Promote Equitable Funding

283. When the Petition was filed in 2014, Pennsylvania was one of only a few states in the country without a consistent school funding formula designed to equalize funding disparities between districts. However, that changed in 2016, when Pennsylvania adopted Act 35. [1/21/22 N.T. 9960-61 (Johnson); 2/3/22 N.T. at 11647–48 (Donley)].

284. Even before Act 35 was adopted, Pennsylvania used state revenue in an effort to offset differences in local taxing capacities and to close the gap between high wealth and low wealth school districts. For example, in the 2014-15 school year, York Suburban School District (“York Suburban”), was able to generate \$14,035 in local revenues, while York City School District (“York City”), generated \$4,227 in local revenue. To partially account for this difference in local taxing capacity, however, York City received nearly four times as much in state funding per ADM (\$10,184) as York Suburban (\$2,781). [PX-02130, Tab 3, Lines 500 and 501].

285. The General Assembly established the Basic Education Funding Commission (“BEF Commission”) pursuant to Act 51 of 2014 and charged it with, among other things, reviewing and making recommendations related to Basic Education Funding and developing a new formula, including identifying relevant factors, which might be used in

distributing Basic Education Funding among school districts in the Commonwealth. [LR-00509-00005].

286. The BEF Commission was a bipartisan Commission that included six representatives from the Pennsylvania Senate (three Democrat and three Republican), six representatives from the Pennsylvania House of Representatives (three Democrat and three Republican) and three members from Governor Wolf's administration. [LR-00509-00008; 11/19/21 N.T. at 1425–26 (Kelly)].

287. The BEF Commission issued its Report and Recommendations on June 18, 2015 after holding fifteen hearings and hearing testimony from over 110 individuals, including superintendents and academics. [LR-00509-00004; 11/19/21 N.T. at 1425–26 (Kelly)].

288. Act 35, enacted by the General Assembly in 2016, adopted into law the funding formula contained in the BEF Commission's Report and Recommendation. [24 P.S. § 25-2502.53(a); 2/7/22 N.T. at 12120–21 (Hanft)].

289. The BEF formula adopted in Act 35 contains two separate components: (1) the base amount; and (2) the student-weighted distribution. 24 Pa.C.S. § 25-2502.53(b).

290. The base amount – commonly referred to as the “hold harmless” provision – is the amount of funding that each school district received in the 2014-15 fiscal year (2013-14 school year). The purpose of the hold harmless base amount is to prevent large swings in state funding from occurring in school districts. [Hanft 7/7/20 Dep. (Vol. 2) at 59].

291. The hold harmless provision of Act 35 is a very common technique used by states so as to not harm school districts that would receive less funding after the passage of the formula. As Mr. Willis observed, almost every state that changes its funding formula includes a

similar provision. As an expert in school financing, he does not find the use of hold harmless to be unreasonable, and the Court agrees with him. [2/10/22 N.T. at 12827-28 (Willis)].

292. The hold harmless provision was the subject of considerable testimony before the BEF Commission. Several superintendents, particularly in small and rural school districts, testified in favor of the hold harmless provision, noting the potentially devastating impact that failing to include a hold harmless component could have on certain school districts. [LR-00509-00039 to 00040].

293. Petitioner PARSS supported the hold harmless clause in the funding formula. [12/22/2021 N.T. at 6420 (Splain)]. Joseph Bard, then-Executive Director of PARSS “testified that hold harmless has provided districts an amount of predictability to an otherwise unpredictable situation, with regard to state funding.” [LR-00509-00039].

294. The BEF Funding Commission recognized in its deliberations that the hold harmless provision prevents the entire BEF funding amount from being distributed based on current school district or student factors, but also found that “eliminating the hold harmless clause would have a significant negative impact on many school districts across the Commonwealth that would be unable to make operational adjustments or generate revenue from other sources to make up for the loss of basic education funding.” Accordingly, the Commission recommended that a base amount be set as of the 2014-15 funding levels and that any new funding would not be subject to hold harmless. [LR-00509-00068].

295. The student-weighted distribution – commonly referred to as the Fair Funding Formula – takes a three-year average ADM for each school district and adjusts that number into a weighted ADM by accounting for certain needs-based factors, including poverty, English Language Learners, charter school attendance and sparsity-size. [7/30/20 Hanft Dep.

Desig. (Vol. 3) at 26-28; LR-00509-00067; 2/7/22 N.T. at 12141-42 (Hanft); 11/30/21 N.T. at 1771-76 (Stem); see also 11/30/21 N.T. at 1761-1762 (Stem) (opining that the formula developed by the BEF Commission “captured it relatively well, the notion of needs of students, different needs requiring different levels of resources.”)].

296. PDE believes that its commitment to equity in education is advanced by Pennsylvania’s Fair Funding Formula, and that Act 35 establishes a fair, equitable formula for allocating new state funds to Pennsylvania schools. [12/2/22 N.T. at 2355, 2378 (Stem)].

297. PDE’s Consolidated State Plan under the Every Student Succeeds Act (“ESSA Plan”) identifies Act 35 as something that the Commonwealth is doing as a strategy for improving the root cause of fiscal inequity. [12/2/22 N.T. at 2380 (Stem)].

298. Despite the passage of Act 35, and due in large part to different local taxing capacities and efforts, there are differences in the total revenue available to each Pennsylvania school district. Although Petitioners wish to focus on the extreme ends of the spectrum, such as Lower Merion which ranked number 5 in total revenue per ADM at \$31,452, the revenue gaps among school districts narrow considerably when the very highest and lowest revenue districts are removed from the analysis as outliers. [PX-02135, Tab 3].

299. For instance, according to PDE revenue data for 2019-20, the school district that ranked number 50 in total revenue per ADM (Blacklick Valley School District) had revenues of \$24,609, while the school district that ranked 450 (Millcreek Township SD) had per ADM revenues of \$15,620. [PX-02135, Tab 3, Lines 126 and 229].

300. Moreover, the data introduced at trial makes clear that the differences in total revenue observed among Pennsylvania’s 500 school districts are not strictly correlated to district wealth. For instance, Pennsylvania’s second largest district, Pittsburgh School District, is

both a district with high poverty rates and one of the highest revenue districts in the Commonwealth at \$27,043 per ADM in 2019-20. [01/13/2022 N.T. at 8410-11 (Noguera); PX-02135, Tab 3, Line 35]. Similarly, Lancaster is a high poverty school district that ranks in the top quintile in total revenue per ADM at \$22,381. [PX-02135, Tab 3, Line 288].

301. Petitioners' expert witness, Dr. Kelly, conducted various analyses that purported to show that lower wealth school districts receive the least revenue and have the lowest expenditures per student. However, most of Dr. Kelly's analyses did not look at actual school district revenues and expenditures, but rather focused on needs-adjusted revenues and expenditures. In conducting his needs-adjusted revenue and expenditures analyses, Dr. Kelly employed a variety of formulas, which produced varied results. [11/19/21 N.T. at 1419–20 (Kelly)].

302. These analyses do not demonstrate that school districts in Pennsylvania with the greatest levels of need receive significantly less total revenue than most other Pennsylvania school districts. Instead, they reflect Dr. Kelly's policy position that lower wealth school districts should receive more total revenue than other school districts.

303. Only one of Dr. Kelly's calculations, PD-00003-0068, examined the relationship between school district wealth and non-adjusted revenues or expenditures. Dr. Kelly acknowledged that when looking at spending quintiles by actual—as opposed to adjusted—spending, there are significant differences with regard to which districts would be in the lowest versus highest quintiles, but Dr. Kelly's report did not identify which school districts were in each of the quintiles that he created and analyzed, under either the adjusted or non-adjusted approach. [11/19/21 N.T. at 1477–78, 1489–901(Kelly)].

304. Dr. Kelly’s analysis strongly suggests that the largest revenue and spending gaps are not between low wealth districts and other school districts in Pennsylvania, but rather between high wealth districts – who are able to raise and spend more local tax dollars to fund their district schools – and all other school districts.

Revenue Per ADM ¹⁵	Expenditures Per ADM ¹⁶
1 \$21,802.97	\$19,510.69
2 \$18,401.01	\$16,601.28
3 \$17,443.14	\$15,927.47
4 \$17,385.82	\$16,099.02
5 \$16,955.24	\$15,802.07

[PD-00003-0068].

305. Under this analysis, school districts within the highest wealth quintile received \$3,400 per ADM more on average than those in the second highest wealth quintile. By contrast, the difference in revenue per ADM between quintiles two (second wealthiest) and five (poorest) was less than \$1,500 per ADM. The difference in expenditures per ADM between quintiles two and five was less than \$800, with a difference of only \$125 per ADM between quintiles 3 and 5. [PD-00003-0068].

306. That higher wealth districts are able to raise and spend larger amounts of local revenue for the benefit of their local public schools is consistent with the deliberate decision by the delegates to the 1873 Convention to omit the word “uniform” from the Education Clause. *William Penn II*, 170 A.3d at 424.

307. Legislative Respondents' expert witness, Max Eden, conducted widespread comparative analyses. He opined, and the Court agrees, that poor students in Pennsylvania receive more per-pupil from the Commonwealth than non-poor students, and Pennsylvania is the eighth most progressive state in American when it comes to total education funding received from all sources. [2/4/22 N.T. at 13296–97 (Eden)].

308. As Dr. Kelly acknowledged, school districts with higher needs receive more state funds than school districts with lower needs, *i.e.*, Pennsylvania has a progressive state funding formula. [11/19/21 N.T. at 1440–41 (Kelly)]. However, he conducted no analysis to demonstrate the extent to which Pennsylvania's progressive funding formula has benefited lower wealth districts.

309. An example of how Pennsylvania uses state funding to assist higher need districts with lower taxing capacity can be seen by comparing the revenue sources for York City School District ("York City") and York Suburban School District ("York Suburban").

310. In the 2019-20 fiscal year, York City had local revenue per ADM of \$4,510, compared to York Suburban, which was able to raise \$15,091 per ADM. However, York City received \$12,648 per ADM in State revenue, compared with \$3,597 for York Suburban. In total revenue, York City received revenues of \$20,552 per ADM compared to \$18,881 for York Suburban. [PX-02135, "2019-20 Rev per ADM" Tab, Lines 500 and 501].

311. With respect to Basic Education Funding, York City had an Average Daily Membership about two-and-a-half times larger than York Suburban (8,275 versus 3,259), but received approximately 25 times more Basic Education Funding (\$70,203,199 versus \$2,842,245). [PX-02135, "2019-20 Rev per ADM" Tab, Lines 500 and 501; PX-01913, "BEF 2019-20 final May2020" Tab, Lines 500 and 501].

312. The \$3.325 billion increase in state education spending since 2014-15 includes approximately \$898.6 million that currently distributed pursuant to the student-weighted Fair Funding Formula. [2/3/22 N.T. at 11658 (Donley); 2/7/22 N.T. at 12141-42 (Hanft)].

313. When combined with the \$100 million in Level Up funding, this means approximately \$1 billion in state funding now passes through the Fair Funding Formula. [11/19/21 N.T. at 1433-35 (Kelly); PX-04778, Tab 2]

314. Based upon current trends and historical practices, the amount of money passing through the Fair Funding Formula is increasing and can be expected to increase in future years. In the 2018-2019 fiscal year, approximately 8.4 percent of BEF was distributed according to the Fair Funding Formula. For the 2021-2022 fiscal year, approximately 15 percent of BEF funds passed through the formula. [11/19/21 N.T. at 1431–32; 1434–35 (Kelly)].

315. High needs districts are benefitting disproportionately from the money that flows through the Basic Education Funding Formula, as indicated by the increase in state revenue per ADM. The money flowing through the Fair Funding Formula has continued increasing each year since its inception. [2/10/22 N.T. at 12814-15 (Willis)].

316. Mr. Willis’s analysis indicated that from 2014-15 to 2021-22, the change in percent BEF in inflation-adjusted dollars (using CPI) was 9 percent across the entire state. The same percentage for each district that Mr. Willis analyzed is 22% for Greater Johnstown, 15% for Lancaster, 31% for Wilkes-Barre, 17% for Panther Valley, 14% for William Penn, 15% for Shenandoah Valley, and 15% for SDP. [2/10/22 N.T. at 12825-26 (Willis); LRD1-0020].

317. The House Appropriations Committee prepared a spreadsheet that lists the 2021-2022 school year Basic Education Funding per Pennsylvania school district, as compared with the prior school year. [2/3/22 N.T. at 11620–21 (Donley); LR-01581].

318. For the 2021-2022 school year, William Penn received over \$25 million in BEF funding, which is about a \$1.7 million increase, or a 7.1 percent increase, from the prior school year. [2/3/22 N.T. at 11624 (Donley) LR-01581-00004].

319. For the 2021-2022 school year, Panther Valley received over \$9.7 million in BEF funding, which is about a \$730,000 increase, or an 8.1 percent increase, from the prior school year. [2/3/22 N.T. at 11625 (Donley) LR-01581-00003].

320. For the 2021-2022 school year, the Lancaster received over \$67 million in BEF funding, which is about a \$3.33 million increase, or a 5.2 percent increase, from the prior school year. [2/3/22 N.T. at 11625 (Donley) LR-01581-00006].

321. For the 2021-2022 school year, Wilkes-Barre received over \$33.8 million in BEF funding, which is about a \$3.5 million increase, or a 11.6 percent increase, from the prior school year. [2/3/22 N.T. at 11625 (Donley) LR-01581-00006].

322. For the 2021-2022 school year, Shenandoah Valley received about \$8.3 million in BEF funding, which is about a \$153,000 increase, or a 1.9 percent increase, from the prior school year. [2/3/22 N.T. at 11626 (Donley) LR-01581-00008].

323. For the 2021-2022 school year, Greater Johnstown received over \$22 million in Basic Education Funding, which is about a \$2.5 million increase, or a 12.9 percent increase, from the prior school year. [2/3/22 N.T. at 11626 (Donley) LR-01581-00003].

324. Since the Fair Funding Formula was enacted, each of the Petitioner School Districts has received consistent year-over-year increases in Basic Education Funding, even as adjusted for inflation. As Mr. Willis explained, the Petitioner School Districts received the following inflation-adjusted increases in Basic Education Funding:

a. William Penn – 2015-16: 3.3%; 2016-17: 4.2%; 2017-18: 1.3%; 2018-19: 1.9%; 2019-20: 3.9%. [LRD1-0014].

b. Lancaster – 2015-16: 4.3%; 2016-17: 6.1%; 2017-18: 2.7%; 2018-19: 1.7%; 2019-20: 1.8%. [LRD1-0015].

c. Greater Johnstown – 2015-16: 3.7%; 2016-17: 4.4%; 2017-18: 2.0%; 2018-19: 3.9%; 2019-20: 2.2%. [LRD1-00016].

d. Wilkes-Barre – 2015-16: 5.7%; 2016-17: 7.0%; 2017-18: 3.3%; 2018-19: 4.1%; 2019-20: 5.3%. [LRD1-00017].

e. Shenandoah Valley – 2015-16: 3.6%; 2016-17: 4.8%; 2017-18: 1.5%; 2018-19: 5.1%; 2019-20: 5.3%. [LRD1-00018].

f. Panther Valley – 2015-16: 4.1%; 2016-17: 5.2%; 2017-18: 2.2%; 2018-19: 2.1%; 2019-20: 2.9%. [LRD1-00019].

325. As Mr. Willis observed, increases in state funding can have an impact on local revenues in public education through what is called “the flypaper effect.” What this means is that when one entity contributes a higher degree of resources to a local community, then local communities tend to pull back on the amount of resources that they are contributing to that issue, thereby causing the relative funding levels to remain the same, albeit from a different source. This is already observable in Pennsylvania because between the passage of Act 35 (in 2016) and 2018, non-Petitioner districts increased funding from local sources by 6.6% while the Petitioner districts only increased local funding by 3.2%. [2/10/22 N.T. at 12829-32 (Willis)].

F. The Costing Out Study

326. Petitioners’ trial presentation sought to assign great importance to the Costing Out Study, which was presented to the State Board in December 2007. [PX-00099-0001].

327. APA notes in the Costing Out Study that “[t]he findings and conclusions contained in this report are those of Augenblick, Palaich and Associates (APA) alone.” [PX-00099-0004].

328. The Costing Out Study was not, and is not, a reliable or trustworthy guide of what the Commonwealth should do, particularly to improve the quality of its students. [02/16/2022 N.T. at 14090 (Hanushek)].

329. Petitioners did not call any representative from APA to testify regarding the Costing Out Study.

330. As described by Legislative Respondents’ expert witness, Dr. Eric Hanushek, the premise of costing-out studies is that scientific methods can provide good advice to decision-makers on education of how much to spend to achieve some particular goal. [02/16/2022 N.T. at 14091 (Hanushek)]. However, no costing-out studies provide a scientific basis for such an effort. [02/16/2022 N.T. at 14091 (Hanushek)]. To the contrary, costing-out studies are inherently subjective and speculative. [2/14/22 N.T. at 13360–61 (Eden)].

331. As a study that was performed 15 years ago, APA’s Costing-Out Study related to Pennsylvania has even deeper flaws and is particularly ill-suited for making decisions in 2022. [02/16/2022 N.T. at 14091 (Hanushek)].

332. As stated by both Dr. Hanushek and Max Eden, another of Legislative Respondents’ expert witnesses, there is simply no empirical basis that allows someone to take a given goal for achievement and translate it into a required dollar amount to achieve that goal. [2/16/2022 N.T. at 14092 (Hanushek); 2/14/2022 N.T. at 13360 (Eden) (opining that “there is no plausibly credible way to assert that X amount of money will yield Y result with any strong degree of confidence”)].

333. A costing-out study is “an attempt to take a given goal for education and figure out what resources would be required by schools to achieve that goal, and then usually it compares those resources to the current level of resources in the state or districts that are involved to make a statement about how much resources should be expanded according to their study.” [02/16/2022 N.T. at 14091-92 (Hanushek)].

334. The fundamental assumption underlying a costing-out study is that “there’s some systematic and consistent relationship between resources provided to schools and the outcomes of students, the achievement of students.” [02/16/2022 N.T. at 14092 (Hanushek)].

335. However, there is a problem with that fundamental assumption underlying costing-out studies because “[w]e have no empirical basis that allows us to take a given goal for achievement and translate that into some required data or required dollar amount.” [02/16/2022 N.T. at 14092 (Hanushek)].

336. As Dr. Hanushek further explained: “no existing research demonstrates a straightforward relationship between how much is spent to provide education services and performance whether student[,], school or school district. If such a relationship existed, then state policymakers could simply determine the level of performance they wanted and provide the appropriate amount of revenue or conversely determine how much revenue was available and know the level of performance that could be attained.” [02/16/2022 N.T. at 14095 (Hanushek)].

337. Nationwide, there have been “hundreds” of attempts to estimate the relationship between school resources and student outcomes. “The majority of the studies that have been done to look at this relationship don’t give any statistically significant or relationship. In other words, they don’t provide much confidence that there’s any relationship of the other studies that have been done; they actually range from some that suggest more resources might

decrease student achievement to a number that suggests that resources in some cases might increase student achievement.” [02/16/2022 N.T. at 14093 (Hanushek)].

338. In early studies, the relationship between school resources and student outcomes was “inconsistent” and “systematically showed zero to possibly negative to possibly positive results for resources.” [02/16/2022 N.T. at 14094 (Hanushek)].

339. As Dr. Hanushek explained, more recent studies are also very inconsistent, both in whether they find a statistically significant relationship and in how big or how serious the relationship is. [02/16/2022 N.T. at 14094 (Hanushek)].

340. There is not an empirical or scientific basis for costing-out studies and those studies do not meet the basic standards of scientific inquiry. [02/16/2022 N.T. at 14100-01 (Hanushek)].

341. One of the methodologies that could be used in a costing-out study is “the professional judgment method,” where a group of people associated with schools are called together and asked to describe a hypothetical school in which students would be able to reach a particular goal. [02/16/2022 N.T. at 14103 (Hanushek)].

342. Another methodology is the “successful schools” or “successful district” approach, which involves considering an array of schools based on how well they are performing in terms of the absolute level of student achievement and then choosing the lower-cost schools among that set of high-performing schools to decide what it would take to get high performance. [02/16/2022 N.T. at 14103 (Hanushek)].

343. The “evidence-based” approach tries to scan the existing scientific literature on specific aspects of schools that might have a positive impact, like extra tutoring of students

after school, and tries to design a school around a set of previous academic studies. [02/16/2022 N.T. at 14103 (Hanushek)].

344. The “statistical” or “cost function method” is a more statistical analysis taking the current data on schools in the state and attempting to determine the relationship between what is being achieved by the students in the schools and what the schools are spending. [02/16/2022 N.T. at 14103-04 (Hanushek)].

345. There are several problems with the professional judgment model. The people who participate in these approaches are not trained in designing new schools. Additionally, participants in the professional judgment model have a conflict of interest because they are designing the resources that go into the schools they work in. In addition, the selection of participants in the professional judgment panels is often suggested by parties interested in the result. Further, professional judgment panels are often not asked to consider efficiency in designing a new model school. [02/16/2022 N.T. at 14104-06 (Hanushek)].

346. There are also several problems with the successful district analysis. The biggest issue is that when school districts are chosen as successful districts, the entity making the choice does not know why the school district is doing well. This is important because high achievement depends upon not only what the schools do, but other factors, like the families and the outside neighborhoods. The successful schools analysis also rests on the basic, and incorrect, assumption that you can simply analyze school spending to determine what it takes to get certain results. [02/16/2022 N.T. at 14106-07 (Hanushek)].

347. Finally, there are problems with the evidence-based approach. This approach requires the party running the costing-out study to directly use research on educational relationships to guide the actual operations of schools, but this is not how academic research is

typically designed to be used. In addition, education research rarely discusses costs, so costs must be determined for each strategy identified in the research. [02/16/2022 N.T. at 14107-08 (Hanushek)].

348. As Dr. Hanushek explained, “there’s a lot of arbitrary judgments that go into all of costing-out studies done by these firms.” [02/16/2022 N.T. at 14109 (Hanushek)].

349. In fact, APA, the author of the Costing Out Study for Pennsylvania has acknowledged that costing-out studies are not based upon scientific work and can be manipulated in various ways. [02/16/2022 N.T. at 14110 (Hanushek)].

350. The APA Costing Out Study used the successful district model, the professional judgment model and the evidence-based model. In Dr. Hanushek’s view, the Costing Out Study suffered from all the problems with these methodologies. [02/16/2022 N.T. at 14112 (Hanushek)].

351. The Costing Out Study was also based on a goal of 100% of Pennsylvania students achieving proficiency. But, as Dr. Hanushek explained, he does not “know of a school, state, country that has ever achieved a hundred percent proficient, at least when ‘proficient’ is defined as a goal for where you want students to be in terms of achievement.” [02/16/2022 N.T. at 14112-13 (Hanushek); *see also* 2/14/22 N.T. at 13363-64 (Eden); 11/18/21 N.T. at 1311-13 (Kelly) (Dr. Kelly’s acknowledgement that he cannot identify a single state in which 100% of students achieved proficiency on standardized tests)].

352. Given that no district or state has reached the goal of 100 percent proficiency, there is no empirical basis for considering what is needed to reach that goal. [02/16/2022 N.T. at 14113 (Hanushek)].

353. Further, APA determined that approximately thirty school districts in Pennsylvania *were* meeting the spending figures goal set by the Costing Out Study, but none of these districts exhibited 100% proficiency among its students in mathematics and reading assessments, as the Costing Out Study predicted that they should. [2/14/22 N.T. at 13368–69 (Eden)]. In fact, when asked whether any of the districts that were already meeting APA’s funding targets received 100% proficiency on their standardized tests that year, Dr. Kelly stated that he had not examined that data. [11/18/21 N.T. at 1311-13 (Kelly)]. This undermines any conclusion that the Costing Out Study reliably measures what it purports to measure, *i.e.*, the cost necessary to achieve 100% proficiency on standardized achievement exams given to students.

354. The APA study did not identify why any school districts were successful. Without understanding why the successful schools in the analysis were successful in the first place, the study will not be useful to any district. [02/16/2022 N.T. at 14115 (Hanushek)].

355. APA did conduct some work to look into educational practices and programs for high-performing and low-spending schools through interviews with principals of schools. [02/16/2022 N.T. at 14115-16 (Hanushek)]. APA’s study of this issue was not made public, but it was included in a separate document. Many of the findings of APA’s study of high-performing and low-spending schools were not mentioned in the Costing Out Study. [02/16/2022 N.T. at 14117-18 (Hanushek)].

356. As Dr. Hanushek stressed, “the most important element of a good school is having highly effective teachers.” [02/16/2022 N.T. at 14119 (Hanushek)].

357. The Costing Out Study does not mention teacher quality. [02/16/2022 N.T. at 14119-21 (Hanushek)]. Nor does the Costing Out Study mention low-expenditure items identified by APA in its interviews with low-spending, high-performing schools, such as setting

high expectations for students, setting up common planning time, and providing district curriculum guidelines. [02/16/2022 N.T. at 14121-22 (Hanushek)].

358. As Dr. Hanushek stated, APA “presume[s] that low spending is the same as highly efficient, but low spending could mean that they had particularly good parents that were helping their students or it might mean a variety of things, but not necessarily that the schools spending is the most efficient.” [02/16/2022 N.T. at 14123 (Hanushek)].

359. When asked how APA treated low-spending, high-achieving districts in its report, Dr. Hanushek explained that it “eliminated” them. As a result, it could be argued that APA failed to consider the most efficient school districts. [02/16/2022 N.T. at 14124 (Hanushek)].

360. A Senate resolution discussing the APA report, made clear that: “the final report does not provide any indication as to how the three methodologies were combined or compared against one another, nor does it provide any other information detailing how the specific recommended numbers and its findings were actually calculated in the study.” [02/17/2022 N.T. at 14271 (Hanushek); Senate Resolution 243, P.N. 1773].

361. The Senate resolution further stated: “both the State Board of Education and APA testified to the Education Committee of the Senate on December 8, 2009, that the specific methodology applied to derive the final funding recommendation cannot be disclosed to the General Assembly because APA believes it is proprietary information.” [02/17/2022 N.T. at 14271 (Hanushek); Senate Resolution 243, P.N. 1773].

362. APA’s professional judgment panel approach suffered from the same problems that afflict all professional judgment approaches. Additionally, APA provided virtually no information regarding the background or qualifications of these panelists, providing only their names and job titles. [02/16/2022 N.T. at 14124 (Hanushek)].

363. As Dr. Hanushek noted, the professional judgment panel could be difficult to replicate and it could be hard to get the same results. [02/16/2022 N.T. at 14127 (Hanushek)]. The instructions given to panelists were not revealed, the discussions between panelists were not reported, and it is unclear how panelists reached consensus. [02/16/2022 N.T. at 14127 (Hanushek)].

364. The evidence-based portion of the Costing Out Study was also deficient. It utilized an abnormal voting mechanism under which participants voted. It is unknown what participants were asked to vote on. As Dr. Hanushek stated: “I just frankly have no idea of how you would take a presumably scientifically constructed list to a group of the population and ask them to vote on whether they thought you should use a particular item.” [02/16/2022 N.T. at 14128-29 (Hanushek)].

365. Although the Costing Out Study mentions a cost-function analysis, there is no discussion in the Costing Out Study report regarding using the results of this work. [02/16/2022 N.T. at 14130 (Hanushek)].

366. APA has never attempted to validate the findings in its Costing Out Study. [02/16/2022 N.T. at 14137 (Hanushek)].

367. The Costing Out Study was not a useful and appropriate study in 2007. [02/16/2022 N.T. at 14130 (Hanushek)].

368. Moreover, the Costing Out Study is even less useful in 2022. [02/16/2022 N.T. at 14131 (Hanushek)]. In Pennsylvania, multiple changes have occurred since the release of the Costing Out Study, including five different finance law changes, altered teacher evaluation procedures, a change in curriculum for schools, and a change in the testing. [02/16/2022 N.T. at 14131-32 (Hanushek)]. Since the release of the APA costing-out study, there have also been

several changes on the federal level, including the Every Student Succeeds Act. [02/16/2022 N.T. at 14136-37 (Hanushek)].

369. The Court concludes that the Costing Out Study is not probative as to whether the General Assembly is meeting its constitutional duties under the Education Clause.

G. Federal Funding

370. PDE also administers and distributes federal funding for education, including federal Title funding (Titles I, I-A, II, IIa, III and IV), federal 21st Century dollars, federal IDEA funding for special education programs, and COVID relief funding. [Stem Dep. at 15:9 to 15:23; 12/1/21 N.T. at 2044 (Stem)].

371. Federal education funding under Title I is targeted to schools with higher percentages of students in poverty to supplement their instructional experiences. [12/1/21 N.T. at 2044-2045 (Stem)]. Approximately 1,700 schools in Pennsylvania receive Title I funds. [12/1/21 N.T. at 2045 (Stem)].

372. Federal education funding under Title II is allocated for teacher professional development, while funding under Title III is for English language learner instruction. [12/1/21 N.T. at 2045-2046 (Stem)].

373. Title IV funds (through an expansion under ESSA) can be used more flexibly to supplement instructional programs through an expansive list of allowable expenses. [12/1/21 N.T. at 2046 (Stem)].

374. Federal funding is also provided through Perkins funds, which are used for career and technical education programs, and McKinney-Vento funds, which are used to support homeless students. [12/1/21 N.T. at 2046-2047 (Stem)].

375. 21st Century funds are competitive federal grants to support extended day, extended school year, and after-hours instructional programs. [Stem Dep. at 124:21 to 125:1].

376. In response to the COVID-19 pandemic, the federal government made available to states three rounds of federal ESSER funding (Elementary and Secondary School Emergency Relief). [12/2/22 N.T. at 2452 (Stem)]. These three rounds of funding – sometimes referred to as ESSER I, ESSER II and ARP-ESSER (American Recovery Plan) or ESSER III– were intended to be used by states to mitigate the impacts of COVID on students. [12/2/22 N.T. at 2452-2453 (Stem)].

377. For Pennsylvania, ESSER I funding (which was given in late Spring or early Summer of 2020) was approximately \$500 million; ESSER II funding (given in November or December of 2020) was approximately \$1.5 billion; and the ESSER III funding was an additional \$5 billion. [12/2/22 N.T. at 2453 (Stem)]. The Department was responsible for determining how the ESSER funds would be distributed to school districts in Pennsylvania, though the General Assembly was also involved. [12/2/22 N.T. at 2453 (Stem); 72 P.S. § 143-C].

378. As Secretary Ortega confirmed, at least 90 percent of the \$5 billion in ARP-ESSER funding flowed directly to school districts and charter schools and was distributed in an amount proportional to the federal Title I funding that was received by school districts. [01/18/2022 N.T. at 8837 (Ortega)]. Pennsylvania also invested \$350 million of ARP-ESSER funds for schools to address learning loss and provide summer enrichment and after-school programs to help students with academic, social, emotional and mental health needs. [01/18/2022 N.T. at 8836 (Ortega)].

379. The Department published spreadsheets showing how the funding was distributed. [12/2/22 N.T. at 2454 (Stem); LR-01638]. As a general matter, the ESSER funds were distributed formulaically to school districts using the same formula that's used to distribute

funds in Title 1. This formula is intended to ensure that lower wealth districts get a higher percentage of the money. [12/2/22 N.T. at 2454 (Stem)].

380. For example, for ESSER I funding, SDP received \$116 million. [12/2/22 N.T. at 2456-58 (Stem); LR-01638]; Reading School District received about \$11.6 million; Allentown City School District received about \$9.8 million. [12/2/22 N.T. at 2457-58 (Stem); LR-01638]. By contrast, Lower Merion School District received about \$249,000 and New Hope-Solebury School District received about \$43,000. [12/2/22 N.T. at 2458 (Stem); LR-01638].

381. For ESSER II funding, SDP received over \$565 million, Reading School District received over \$51 million, and Allentown School District received over \$43 million. [12/2/22 N.T. at 2459-60 (Stem); LR-01637]. By contrast, Lower Merion School District received just over \$1 million and New Hope-Solebury received \$166,791. [12/2/22 N.T. at 2460 (Stem); LR-01637].

382. For ARP-ESSER funding, SDP received over \$1.1 billion, Reading School District received over \$104 million, and Allentown School District received over \$88 million. [12/2/22 N.T. at 2462-63 (Stem); LR-01573]. By contrast, Lower Merion School District received just under \$2.2 million and New Hope-Solebury received \$336,000. [12/2/22 N.T. at 2463-64 (Stem); LR-01573].

383. School districts are required to spend the ESSER funds within a certain time period: ESSER I funding must be spent by September of 2022, ESSER 2 funding must be spent by September of 2023, and ARP-ESSER funding must be spent by September of 2024. [12/2/22 N.T. at 2462-2463 (Stem)].

384. The permitted expenses for ESSER funds are those which address the impacts of COVID on school communities and the funds are intended to be used to mitigate some

of the negative impacts of COVID on students. [12/2/22 N.T. at 2464 (Stem)]. Such monies can be used for health and safety activities or functions, instructional functions, or facilities-related needs (relating to air quality or social distancing). [12/2/22 N.T. at 2464-2465 (Stem)]. For ARP-ESSER funding, some funds must be set aside to address learning loss caused by the pandemic. [12/2/22 N.T. at 2465 (Stem)].

385. On March 29, 2021, Secretary Ortega published a letter to his colleagues offering some guiding principles for initial efforts to implement ARP-ESSER funding, with the first being to “evaluate both short and long term needs.” [LR-01725-00002 to 00003]. As Mr. Stem explained, Secretary Ortega was communicating to school district leaders “a reminder that these are one-time funds, these are non-recurring funds, and that the districts should be . . . thoughtful about how they’re leveraging these funds for short and longer term needs, knowing that in 2024, that these funds would no longer be available.” [12/2/22 N.T. at 2467-2468 (Stem)]. As he further explained, PDE was “advocating for a strategic approach to meeting students’ needs through these funds, and a thoughtful approach that considers all funding sources in well-conceived ways.” [12/2/22 N.T. at 2468 (Stem)].

386. Thus, PDE recognized that while ESSER funds are one-time and should not be committed to recurring costs, there are ways that school districts could use these funds to meet long-term needs and achieve long-term benefits. [12/2/22 N.T. at 2468-2469 (Stem)]. For instance, Mr. Stem agreed that improving the HVAC systems within a district’s schools could be something that would be a one-time expense that might also serve long-term needs. [12/2/22 N.T. at 2469 (Stem)]. As Mr. Stem further explained, using ESSER funding to meet longer term needs could free up other funds (which otherwise might have been needed to meet those purposes) to

serve a district's other needs – an approach for which PDE advocates. [12/2/22 N.T. at 2470 (Stem)].

387. As discussed in more detail later, Petitioner School Districts put their ESSER funding to a variety of uses, including but not limited to purchasing one-to-one student computers to permit remote learning; purchasing other technology products and support; updating curricula; reducing class size; hiring teachers, interventionists and other staff; installing or updating HVAC systems; and making other facilities repairs. By way of example only, some of the uses of ESSER funding made by Petitioner School Districts included:

a. Greater Johnstown installed or plans to install a new roof and HVAC system at the elementary school; installed or plans to install air conditioning at the high school; hired a curriculum director to rejuvenate the curriculum; hired eight instructional tutors, additional behavioral interventionists and a school counselor; provided summer learning opportunities; acquired Smartboards, Wi-Fi hotspots, headphones, headsets, and microphones; replaced or plans to replace the air handler units in the middle school and the hot-water pump in the high school; and acquired the Schoology learning management system. [12/3/21 N.T. at 2663–64, 3091, 2724, 2738, 2745–46, 2787; 12/7/21 N.T. at 2985, 3080–83, 3156–57, 3091; 12/8/21 N.T. at 3252, 3259, 3265 (Arcurio); LR-03163].

b. Lancaster purchased new math materials for kindergarten through second grade; purchased an updated curriculum resource, the American Reading Company (“ARC”) Program, for its third through fifth grades; and purchased additional novels for its middle school students. Lancaster also plans to upgrade its ventilation systems by purchasing and installing air filter machines; to spend roughly \$7 million to continue upgrading its technology by purchasing snowball microphones, cameras, and Apple TVs in every classroom; and to spend

roughly \$18.5 million of its ESSER funds towards academic support, including reaching its goal to have a teacher-student ratio of 1-to-20. [12/17/21 N.T. at 5311–12, 5503-08 (Rau)]. Additionally, notwithstanding the guidance that it should not use ESSER funds for recurring expenses, Lancaster’s School Board allocated \$10 million of ESSER funding to offset Lancaster’s ongoing deficit, which means that the ESSER funds are being used for ongoing programs. [12/20/21 N.T. at 5713–14 (Przywara)].

c. Panther Valley purchased Chromebook laptops for each of its students in the District; updated its curriculum by adding new courses for its students; purchased a new Phonics program, including textbooks for its English classes from kindergarten through third grade; purchased new math textbooks for its kindergarten through sixth grade students and a new online mathematics series for its seventh and eighth grade students; purchased new Spanish textbooks; paid paraprofessional salaries; re-initiated its summer school course offerings; added numerous Smartboards in its classrooms; purchased materials for its STEM program in the intermediate school; purchased additional special education supplies; and upgraded its Wi-Fi hot spots throughout its buildings. [11/15/21 N.T. at 286, 393, 430, 444–45, 544–45; 11/16/21 N.T. at 588–89, 592, 621, 742–44 (McAndrew)].

d. Shenandoah Valley purchased Chromebooks and PPE for students, as well as textbooks for online learning, internet connectivity and transportation. In the future, the district plans to use ESSER funds to update heating and ventilation systems, and upgrade its air-conditioning systems. [12/8/21 N.T. at 3506–07 (Waite); 12/9/21 N.T. at 3735, 3739, 3455 (Waite)]. Shenandoah Valley is also looking to hire an additional ELL teacher and social worker using its ESSER funds. [12/8/21 N.T. at 3395, 3455 (Waite)].

e. Wilkes-Barre provided a Chromebook to every student in the district and upgraded its digital infrastructure, including routers and projectors. The district also plans to use the ESSER funds for dual enrollment tuition, summer school, HVAC upgrades, roof replacements, additional books, and bringing back some of the teachers it had furloughed when it consolidated its high schools. [1/26/22 N.T. at 10794–97, 10873–74 (Costello)].

f. William Penn acquired Chromebooks for students; updated its curriculum; supported its summer enrichment academy; provided mental health supports; and improved its technology infrastructure. The District plans to use the third round of ESSER funding “to address our facility concerns.” [01/10/2022 N.T. at 7423-25 (Becoats)].

H. Inflation Adjustments and “Mandated Costs”

388. Petitioners’ expert, Dr. Kelly, and Legislative Respondents’ expert, Mr. Willis, testified regarding the increases in education funding adjusted for inflation.

389. As of the 2019-20 fiscal year, total public education spending in Pennsylvania from all sources had increased by approximately \$5.4 billion since 2012-13 and by approximately \$5.63 billion since 2008-09 when adjusted for inflation, per Mr. Willis’ analysis. [LRD1-00004].

390. Looking at State spending only, Mr. Willis calculated, and the Court agrees, that from 2012-13 to 2020-21, the education subtotal of the State’s budget increased by \$2.3 billion (from \$11.6 billion to \$13.9 billion) when adjusted for inflation. [2/10/22 N.T. at 12745-47 (Willis); LRD1-00007]. In making his inflation-adjusted analysis, Mr. Willis did not consider education spending for the 2021-22 fiscal year because CPI figures were not available for the last five months of that period. However, he noted that in Dr. Kelly’s analysis, inflation-adjusted State education funding increased by \$200 million from 2020-21 to 2021-22. [2/10/22 N.T. at 12747-48 (Willis)].

391. Dr. Kelly opined that between the 2012-2013 school year and the 2021-2022 school year, the education subtotal in Pennsylvania's budget increased by approximately \$1.6 billion in inflation-adjusted real dollars. [2/22/2 N.T. at 14534 (Kelly)].

392. The principal difference in the calculations performed by these experts is that Mr. Willis used as his inflationary index the Consumer Price Index ("CPI") and, in particular, the CPI-Urban ("CPI-U"), for the Mid-Atlantic region, while Dr. Kelly used Pennsylvania's Act 1 Index. [2/10/22 N.T. at 12745-47 (Willis); 2/22/2 N.T. at 14534 (Kelly)].

393. Dr. Kelly testified that he used the Act 1 Index because it is a Pennsylvania specific inflation index set forth in the School Code. [2/22/2 N.T. at 14497-98 (Kelly)].

394. When asked about the CPU-I's effect on the calculation of Pennsylvania's overall education funding between 2012 and 2022, Dr. Kelly admitted that using the CPI-U index, rather than the Act 1 Index, would result in a greater inflation-adjusted increase in state funding. [2/22/22 N.T. at 14542 (Kelly)].

395. As Mr. Willis explained, he typically uses the CPI when adjusting for inflation in his work, and did so in his analysis for this case, because the CPI is an index that is developed by the Federal Government and is a very consistently updated metric used across the country. As Mr. Willis further explained, CPI is preferable to the Act 1 Index in a couple notable ways. The Act 1 index is meant to be able to adjust property tax caps in local districts as a means for those school districts to raise additional revenue. Its purpose and intent is slightly different from the CPI's, which primarily looks at adjustments for costs that are out of a district's control. The CPI is an independent, economically and financially driven index that is both stable and widely applied in the research community. [2/10/22 N.T. at 12738-42 (Willis)].

396. Petitioner’s own expert witness, Dr. Johnson, testified that he also uses the CPI-U when he adjusts for inflation because “it is the standard in the field[.]” [1/21/22 N.T. at 9746 (Johnson)].

397. The Court finds that the CPI-U is the better index to adjust school revenues and expenditures for inflation, because it is a nationally normed index and the index that is most commonly used by experts in the field to calculate the impact of inflation on education spending. Nevertheless, under either inflation measure, the evidence shows, and the Court finds, that the State’s spending on education since the 2012-13 school year has increased between \$1.6 and \$2.3 billion when adjusted for inflation.

398. In addition to the general impact of inflation, several of Petitioners’ witnesses testified about increases that they incurred in specific expense areas, especially special education costs, pension costs and charter school reimbursement, which they termed “mandated costs” or “unreimbursed mandated expenses.” [11/19/21 N.T. at 1551—52 (Kelly)]. Petitioners also presented several summary exhibits purporting to show “mandated costs.”

399. Public schools must incur a variety of expenses in order to deliver required instructional content to students. For instance, schools are legally required to offer classes in mathematics and English language arts. [12/9/21 N.T. at 3859 (Waite)]. Likewise, teacher salaries and benefits, which make up a majority of a school district’s budget could be deemed as “legally required,” in that they result from and are required under collective bargaining agreements with relevant labor unions. [1/26/22 N.T. at 10975-79 (Costello); 01/07/2022 N.T. at 7215 (Harbert)].

400. Unreimbursed special education costs, pension costs and charter school reimbursement are among many types of expenses, including salary and benefits paid to teachers, paid from a school district’s general budget. [12/9/21 N.T. at 3859-60 (Waite)].

401. For this reason, the Court finds the term “mandated costs” to be a misnomer when applied to identify cost increases in selected categories of a school district’s operational expenses, *i.e.*, special education costs, pension costs and charter school reimbursement.

402. Petitioners’ witnesses could not fully explain what items were included within the “mandated” unreimbursed special education costs because they had “minimal” involvement in preparing the summary exhibits relating to self-described “mandated cost” items. [12/9/21 N.T. at 3834-35, 3847-50 (Waite); see also 1/26/22 N.T. at 11050 (Costello)].

403. While both federal and state law impose legal obligations upon schools and school districts with respect to the education of students with disabilities, this does not mean that all special education costs occurred by school districts are legally mandated. School districts are required to create an individualized program of education (“IEP”) for all special education students. However, the task of determining which students meet the criteria to be classified as special education; the crafting of a student’s IEP; and the determination of what specific resources are provided to each special education student pursuant to that IEP are made at the school level by school district professionals in consultation with students’ families. [01/07/2022 N.T. at 7206-07 (Harbert); 12/9/21 N.T. at 3834-35, 3837-41 (Waite)].

404. For instance, as Superintendent Costello of Wilkes-Barre explained, beginning in 2017-2018, the Wilkes-Barre Area School District undertook an initiative to “bring back autistic and life skills classrooms,” and the district included the cost of such classrooms in its summary exhibit showing “mandated” special education costs, even though it had previously relied upon outside agencies to provide those services to some of its students. [1/26/22 N.T. at 10975-79 (Costello)].

405. With regard to pension costs, rising teacher pension costs are an issue in almost every state in the union. This is not a unique problem to Pennsylvania. [2/10/22 N.T. at 12861 (Willis)]. Such costs are an expense of recruiting and retaining qualified teachers and other professional employees, just as salary, health care or any other employee benefits. As acknowledged by Petitioners' expert, Dr. Kelly, retirement costs are a compensation benefit for Pennsylvania's teachers and are important to attracting qualified teachers; and without qualified teachers, there could be no thorough and efficient system of public education. Therefore, the increase in these costs was a necessary educational expense. [11/19/21 N.T. at 1501– 04 (Kelly); LR-02021-00062 at Figure 26].

406. Further, pension costs are at least partially within a school district's control, in that a school district's retirement costs are determined in part by the salaries that the district collectively bargains with its teachers' union, which factor into calculating a teacher's pension. [1/26/22 N.T. at 11056 (Costello)].

407. The General Assembly has attempted to address the issue of rising pension costs in a few ways. One way is that it passed Act 5 of 2017, which moved from a defined benefit system to a hybrid system that utilizes defined contributions for newly hired teachers. [2/10/22 N.T. at 12863 (Willis); 2/3/22 N.T. at 11661–63 (Donley)].

408. Additionally, the General Assembly has increased the percentage of total PSERS expenses that the Commonwealth funds. Dr. Kelly's report features a chart, Figure 26, which shows the increase in the state-wide funding to districts' retirement contributions from the 2008-2009 school year to the 2018-19 school year. Over that time, retirement costs have increased by \$3.3 billion in real dollars, of which the State's share has increased by \$1.9 billion. [11/19/21 N.T. at 1501–04 (Kelly); LR-02021-00062 at Figure 26]. Thus, according to Dr. Kelly's

calculations, Pennsylvania has funded more than 50% of the increased pension and retirement costs for its teachers from 2008 through 2019. Dr. Kelly did not analyze the percentage increase of state teacher retirement funding that the Petitioner districts received during that same time frame [11/19/21 N.T. at 1503–04 (Kelly); LR-02021-00062 at Figure 26].

409. As demonstrated by a summary exhibit prepared by Legislative Respondents, using PDE data, the State’s percentage of contribution to retirement expenses for Petitioner Districts and SDP in 2019-20 ranged from 64% to 79%, compared to a statewide average of 57% for all districts. [LR-05062a]. This was an increase from 2014-15, in which the State’s contribution to retirement expenses ranged from 61% to 74% for Petitioner Districts and SDP, and the average contribution for all districts statewide was 55%. [LR-05062a].

410. With respect to charter schools, 24 Pa.C.S. 17-1725-A requires school districts to pay a per student reimbursement for students living within the geographic boundaries of their school district. For non-special education students, reimbursement is based on the district’s total revenue per ADM for the prior school year minus certain expenditure items such as pupil transportation; facility construction, acquisition and improvement; and other financing uses, such as debt service. For special education students, the reimbursement is based on the same funding plus an additional amount determined by a formula. Therefore, where a school district’s revenue per ADM increases, so will its charter school reimbursement rate.

411. In addition to increased reimbursement rates resulting from higher school district revenues, the rise in charter school reimbursement costs is due in large part to the fact that more students are choosing to attend charter schools than in the past. [LRD1-00034; 2/10/22 N.T. at 12866-67 (Willis)].

412. Petitioners’ characterization of charter school reimbursement as mandated increases in costs that adversely impact public education fails to give proper consideration to the fact that, under state law, charter schools are public schools. It also fails to account for cost savings associated with students who are no longer being educated in district schools. As Mr. Willis explained, the number of a school district’s students who attend charter schools is directly related to the district’s expenditures, because a school district should be “able to reduce its expenditures relative to those students no longer being in their system.” [2/10/22 N.T. at 12864-65 (Willis)].

413. Specifically, as charter schools are established in communities, students tend to leave district schools not as one or two students, but in “bundles,” e.g., of 20, 50, 100, 200. School districts have mechanisms for adjusting staffing and other expenses to account for the migration of those students to charter schools. While this does not mean that all expenses associated with these students can be saved, school districts should be able to make adjustments to offset a proportion of the revenues attributable to students no longer attending the district’s schools. [2/10/22 N.T. at 12865-66 (Willis)]. Petitioners’ calculations make no attempt to account for these savings.

414. Furthermore, the Petitioners’ summary exhibits that compare “Basic Education Funding versus mandated costs” do not account for increases in non-BEF appropriation items, such as Ready to Learn Block Grants. [1/26/22 N.T. at 11050-51 (Costello)].

415. In sum, while the Court recognizes that school districts have incurred increased costs in certain areas, this does not negate the evidence that Pennsylvania has made a clear commitment to adequately and equitably funding its schools, including but not limited to:

a. Enacting numerous statutes that authorize state and local appropriations for public education, and which result in Pennsylvania's total per-student spending on education far exceeding the national average and being higher than many of its peer states.

b. Enacting Act 35, to provide a fair and consistent formula for the distribution of State funding.

c. Enacting annual State budgets that have provided consistent increases in education funding, even as adjusted for inflation, including targeted increases for areas such as pre-K and early childhood education, Career and Technical education, and STEM education.

V. PENNSYLVANIA'S PUBLIC SCHOOL DISTRICTS AND TEACHERS

A. Teacher Certification and Continuing Education

416. Under Pennsylvania law, the general requirement is that, in public schools, certified teachers must teach academic classes. [12/1/21 N.T. at 2124 (Stem)].

417. The Commonwealth's certification requirements for teachers are recognized as among the most rigorous and comprehensive in the nation. Pennsylvania, for example, has some of the nation's highest standards for achieving passing scores on the subject area tests that teachers must take as part of the certification process. Pennsylvania also has rigorous GPA and student-teaching requirements for teacher certification. [12/2/22 N.T. at 2356-2357 (Stem); PX-01830-0079].

418. To become certified in Pennsylvania, a teacher must, as a general matter, complete a four- or five-year bachelor's degree program and pass an exam. [12/1/21 N.T. at 2117 (Stem)]. Pennsylvania has over 100 colleges, universities, and other providers that offer teacher certification programs that PDE has approved. [12/1/21 N.T. at 2119 (Stem); LR-04196-00001]. Alternative paths to teacher certification are also available. [LR-04196-00001].

419. To become certified as a teacher in Pennsylvania, in addition to meeting the requirements that are noted above, an individual must be of good moral character; be at least 18 years old; be a United States citizen or a legal permanent resident who holds a valid green card; hold a minimum of a bachelor's degree; complete a PDE-approved preparation program and do so with a GPA of 3.0 (or higher); meet all of the testing requirements; submit an online application through the Teacher Information Management Systems ("TIMS"); and have the preparation program provider verify, through TIMS, that he or she successfully completed the program. [12/1/21 N.T. at 2121-22 (Stem); LR-04194-00001].

420. In order to be accepted into a teacher preparation program that a college or university offers, an individual must pass a basic skills assessment. [12/1/21 N.T. at 2122 (Stem)]. In some cases, SAT or ACT scores can serve as a proxy for passing the basic skills assessment. [12/1/21 N.T. at 2123 (Stem)]. After being accepted into the program, the individual must maintain the GPA that the college or university requires and fulfill the other program requirements that it has established and then must take and pass an ETS exam (most often the Praxis) that pertains to his or her major. [12/1/21 N.T. at 2122-2123 (Stem)].

421. Before receiving a Pennsylvania teaching certification, a teacher must complete certain induction activities, including programs regarding special education. [12/1/21 N.T. at 2131 (Stem)].

422. When a teacher first receives a Pennsylvania teaching certification, it is a Level I certification. [12/1/21 N.T. at 2129 (Stem)]. In relation to teachers at higher certification levels, Level I teachers are evaluated more frequently. Further, they are required to meet certain requirements to be elevated to Level II. [12/1/21 N.T. at 2129 (Stem)].

423. After receiving a Pennsylvania teaching certification, a teacher must complete professional development requirements, which are set forth in Act 48. [12/1/21 N.T. at 2126-27 (Stem); LR-04228]. As a general matter, the teacher has five years to complete six credits of collegiate study, six credits in approved professional education courses, or, separately, 180 continuing education hours. [12/1/21 N.T. at 2127-2128 (Stem); LR-04228-00001]. This requirement is renewed every five years and applies to educators holding a Level I or Level II teaching certificate. [LR-04228-00002 to 00003].

424. Under Pennsylvania law, professional development obligations for certified teachers can be satisfied by obtaining credits in college programs or taking approved courses that are offered through the Department's professional development center. [12/1/21 N.T. at 2128 (Stem)]. With the Department's approval, moreover, school districts may award professional development credits for attending programs that the district leads. [12/1/21 N.T. at 2128 (Stem)].

425. Pennsylvania also provides robust and rigorous programming and supports to train and assist building and system administrators at school districts and charter schools. The initiatives that Pennsylvania uses to provide supports and programming to school leaders include the Pennsylvania Inspired Leadership Program, the Pennsylvania Secretary of Education's Superintendents' Academies, a collaboration in a multi-state partnership to develop a master principal certification, and the creation of a network of principal mentors. [PX-01830-00016].

B. Class Size and Student-to-Teacher Ratios

426. School districts often cite to their student-to-teacher ratios as an aggregated measure of class size. [See, e.g., LR-00924-00002 (referring to Shenandoah Valley's student-to-teacher ratio of 13 students per teacher); 12/9/21 N.T. at 3715 (Waite) (same)]. According to Petitioners' expert witness, Dr. Johnson, student-to-teacher ratios are an aggregated measure of class size. [1/21/22 N.T. at 9849-50 (Johnson)].

427. In 2020-21, according to PDE data, the average student-classroom teacher ratio in Pennsylvania school districts was 14.21 students per classroom teacher. [LR-05038A-00001]. The average student-classroom teacher ratio in Pennsylvania school districts has decreased over the past nine years. In 2012-13, the average student-classroom teacher ratio in Pennsylvania was 15.09 students per classroom teacher. [LR-05038A-00001].

428. The average student-classroom teacher ratio in Pennsylvania school districts is at its lowest level in the past nine years. [LR-05038A-00001].

429. In 2019, according to the National Center for Education Statistics (NCES), Pennsylvania's pupil-to-teacher ratio was 13.9 pupils per teacher. [NCES, Digest of Education Statistics, Table 208.40, Column 15 (2022), available at https://nces.ed.gov/programs/digest/d21/tables/dt21_208.40.asp?current=yes]. In 2019, the nationwide pupil-teacher ratio was 15.9, meaning that, on average, Pennsylvania had two fewer pupils per teacher than the national average. *Id.* As of 2019, Pennsylvania had the 15th smallest pupil-teacher ratio among states in the nation. *Id.* Between 2000 and 2019, Pennsylvania's pupil-teacher ratio decreased from 15.5 pupils per teacher to 13.9 pupils per teacher. [*Id.* at Column 2 and 15].

430. In 2020-21, according to data from PDE, the average student-total staff ratio in Pennsylvania school districts was 7.14 students per staff member. [LR-05038A-00001]. The average student-total staff ratio in Pennsylvania school districts has decreased over the past nine years. In 2012-13, the average student-total staff ratio in Pennsylvania school districts was 7.53 students per staff member. [LR-05038A-00001].

431. The average student-total staff ratio in Pennsylvania school districts is at its lowest level in the past nine years. [LR-05038A-00001].

432. In 2019, according to the NCES, Pennsylvania's pupil/staff ratio was 6.9 pupils per staff member. [NCES, Digest of Education Statistics, Table 213.50, Column 18 (2022), available at https://nces.ed.gov/programs/digest/d21/tables/dt21_213.50.asp?current=yes]. In 2019, the nationwide pupil-staff ratio was 7.6, meaning that, on average, Pennsylvania schools had 0.7 fewer pupils per staff member than the national average. *Id.* As of 2019, Pennsylvania had the 13th smallest pupil-staff ratio among states in the nation. *Id.* Between 2000 and 2019, Pennsylvania's pupil-staff ratio decreased from 8.1 pupils per staff member to 6.9 pupils per staff member. [*Id.* at Column 2 and 18].

C. Teacher Experience and Education

433. According to PDE data, the average classroom teacher in a Pennsylvania school district has 15.5 years of teaching experience. [LR-05038A-00001]. The average experience level of classroom teachers in Pennsylvania school districts has increased over the last nine years. In 2012-13, the average classroom teacher in a Pennsylvania school district had 13.9 years of teaching experience. [LR-05038A-00001]. It has, in fact, increased by 11.51% during this time frame. [LR-05038A-00001].

434. The average teaching experience level for classroom teachers in Pennsylvania school districts is at its highest level in the past nine years. [LR-05038A-00001].

435. According to PDE data, the average classroom teacher in a Pennsylvania school district has been teaching at their school district for 14.1 years. [LR-05038A-00001]. The average amount of time teachers have been with their current school district has increased over the last nine years. In 2012-13, the average classroom teacher in a Pennsylvania school district had been teaching at their school district for 12.3 years. [LR-05038A-00001]. It has, in fact, increased by 14.63% during this time frame. [LR-05038A-00001].

436. The average amount of time that classroom teachers in Pennsylvania school districts have spent at their school districts is the longest that it has been in the past nine years. [LR-05038A-00001].

437. Based on PDE data, the average classroom teacher in a Pennsylvania school district has an education level of 4.6. [LR-05038A-00001]. This statistic is based on a scale created by PDE. On this scale, a bachelor's degree is represented as a "4" and a master's degree is represented as a "5." [LR-00485, Tab "Contact Info & Definition", Rows 54-60].

438. Accordingly, based on the scale used by PDE, more than half of classroom teachers in Pennsylvania school districts have a master's degree or higher. [LR-05038A-00001].

D. Teacher Salaries

439. In 2020-21, according to PDE data, the average classroom teacher in a Pennsylvania LEA (including school districts, charter schools, intermediate units, career and technical centers, and state juvenile correctional institutes) earned a salary of \$71,478.37. [LR-00485, "State_Averages" Tab].

440. Over the past nine years, there has been an increase in salaries for classroom teachers in Pennsylvania LEAs. As PDE reported, in 2012-13, the average classroom teacher in a Pennsylvania LEA earned a salary of \$63,002.75. [LR-00409, "State_Averages" Tab]. By 2020-21, that salary level had increased by \$8,475.62 or 13.45%. [LR-00485, "State_Averages" Tab; LR-00409, "State_Averages" Tab].

441. The NCES reports teacher salary data in two categories: salaries for teachers who have earned a bachelor's degree and salaries for teachers who have earned a master's degree. NCES, Digest of Education Statistics, Table 211.30 (2022), available at https://nces.ed.gov/programs/digest/d21/tables/dt21_211.30.asp?current=yes; Table 211.40 (2022), available at https://nces.ed.gov/programs/digest/d21/tables/dt21_211.40.asp?current=yes.

442. According to the NCES, as of 2017-18, the average Pennsylvania teacher with a bachelor's degree earned a higher salary than similar teachers nationwide. NCES, Digest of Education Statistics, Table 211.30, Column 9 (2022), available at https://nces.ed.gov/programs/digest/d21/tables/dt21_211.30.asp?current=yes. The average Pennsylvania teacher with a bachelor's degree earned \$57,080, while the average teacher with a bachelor's degree nationwide earned \$49,890. *Id.* Relative to similarly-situated teachers in other states, a Pennsylvania teacher with a bachelor's degree earned the eighth highest average salary in the nation. *Id.*

443. Nationwide, in 2017-18, the average teacher with a bachelor's degree and two or fewer years of teaching experience earned \$42,390; in Pennsylvania, the average teacher with a bachelor's degree and two or fewer years of teaching experience earned \$47,630. *Id.* at Col. 10. Likewise, in 2017-18, the average teacher nationwide with a bachelor's degree and over 20 years of teaching experience earned \$60,700. In Pennsylvania, the average teacher with a bachelor's degree and over 20 years of teaching experience earned \$71,850. *Id.* at Col. 14.

444. According to the NCES, as of 2017-18, the average Pennsylvania teacher with a master's degree earned a higher salary than similar teachers nationwide. NCES, Digest of Education Statistics, Table 211.40, Column 10 (2022), available at https://nces.ed.gov/programs/digest/d21/tables/dt21_211.40.asp?current=yes. The average Pennsylvania teacher with a master's degree earned \$68,830, while the average teacher with a master's degree nationwide earned \$63,120. *Id.* Relative to similarly-situated teachers in other states, a Pennsylvania teacher with a master's degree earned the 10th highest average salary in the nation. *Id.*

445. Nationwide, in 2017-18, the average teacher with a master's degree and 5 or fewer years of teaching experience earned \$50,890; in Pennsylvania, the average teacher with a master's degree and 5 or fewer years of teaching experience earned \$51,960. *Id.* at Col. 11. Likewise, in 2017-18, the average teacher nationwide with a master's degree and over 20 years of teaching experience earned \$73,200. In Pennsylvania, the average teacher with a master's degree and over 20 years of teaching experience earned \$79,200. *Id.* at Col. 14.

E. Teacher Evaluations

446. Act 82 of 2012 created a new system for evaluating educator effectiveness. [Act 82 of 2012 § 14.1]. Beginning in 2013-14, Pennsylvania's public school teachers were evaluated under the standards that Act 82 put in place. *Id.* Act 13 of 2020 revised the Act 82 educator effectiveness rating process, but the new methodology was not used until the current (2021-22) school year. [Act 13 of 2020; 12/1/21 N.T. at 2133 (Stem)]. Accordingly, at the time of trial, educator effectiveness ratings that were derived from the new methodology were not available. [12/1/21 N.T. at 2133 (Stem)].

447. Act 82 educator effectiveness ratings were based on a combination of scores that were predicated on observations of teachers and student performance data, including value-added growth scores, tests scores, graduation and promotion rates, and locally-developed and selected elective data, among other items. Under Act 82, a classroom observation of a teacher was required to cover the following areas: (a) planning and preparation, (b) classroom environment, (c) instruction, (d) professional responsibilities. [Act 82 of 2012 § 14.1].

448. Under Act 82, the following educator effectiveness ratings were used to rate Pennsylvania public school teachers: (i) "failing," (ii) "needs improvement (unsatisfactory)," (iii) "needs improvement (satisfactory)," (iv) "proficient," and (v) "distinguished." [LR-00458, "2018_19 LEA SD Totals" Tab; Act 82 of 2012 § 14.1]. A rating of "failing" or "needs

improvement (unsatisfactory)” was deemed to be unsatisfactory; all of the other ratings were deemed to be satisfactory. [Act 82 of 2012 § 14.1].

449. Under this regime, approximately 96 to 98 percent of Pennsylvania public school teachers were rated as “satisfactory” each year. [12/1/21 N.T. at 1948 (Stem)].

450. In 2018-19, under Act 82, 108,315 teachers received educator effectiveness ratings from their school districts. [LR-00458, “2018_19 LEA SD Totals” Tab]. Among those teachers, 187 of them were rated as “failing” or “needs improvement (unsatisfactory).” Therefore, only about 0.17% percent of the teachers who received the educator effectiveness ratings were rated as unsatisfactory. Conversely, 108,128 of the teachers were rated as satisfactory, given that they were deemed to be “proficient,” “distinguished,” or “needs improvement (satisfactory).” Therefore, about 99.8% of the teachers who received the educator effectiveness ratings were rated as satisfactory. 84,356 of the teachers (or about 77.9%) were rated as proficient, and 22,948 (21.2%) of the teachers were rated as distinguished. [LR-00458, “2018_19 LEA SD Totals” Tab].

451. Apart from teacher evaluations that school districts have conducted under Act 82, PDE has developed its own educator rating system, which is based on selected portions of the rating system that the statute established. PDE’s educator rating system is used in its reporting under the Every Student Succeeds Act and in other contexts. [12/1/21 N.T. at 1943-46 (Stem)].

452. In relation to the rating system that Act 82 established, PDE’s educator rating system differs in that it does not take account of a portion of the educator effectiveness observation score that the teacher’s supervisor generates. In particular, PDE eliminated the portion of the score that is based on the teacher’s planning and preparation. PDE also eliminated teacher-specific data and building-level data [12/1/21 N.T. at 1944 (Stem)].

453. Under PDE’s separate educator rating system, teachers are rated as either “ineffective” or “effective.” These ratings are not required by law. In fact, PDE’s educator ratings are anonymous and teachers are not informed of the ratings that they receive under this system. By contrast, they are informed of the ratings they receive under Act 82. [12/2/21 N.T. at 2358-59 (Stem)].

454. PDE’s educator rating system is inconsistent with the Act 82 rating system. As one example, in the 2018-19 school year, all 119 teachers at McGuffey School District were deemed to be “ineffective” under PDE’s system. [LR-00458, Tab 2018_2019 LEA SD Totals, Row 242, Columns L-O]. However, when the same teachers were evaluated under Act 82, all 119 of them were rated as either proficient or distinguished. In particular, 94 teachers were rated as proficient and 25 were rated as distinguished. [LR-00458, Tab 2018_2019 LEA SD Totals, Row 242, Columns H-J]. Accordingly, 25 McGuffey School District teachers rated as distinguished and 94 teachers rated as proficient under Act 82, were rated as ineffective by PDE.

455. Similarly, at Brownsville Area School District, Central York School District, Clairton City School District, East Allegheny School District, Northern Cambria School District, Reynolds School District, Shade-Central School District, South Williamsport School District, Steelton-Highspire School District, Turkeyfoot Valley Area School District, Upper Dauphin Area School District, and Washington School District, 100% of the teachers who were rated under Act 82 were rated as satisfactory, with the vast majority of them being rated as proficient or distinguished. [LR-00458, Tab 2018_2019 LEA SD Totals, Rows 54, 77, 85, 126, 297, 358, 380, 403, 419, 435, 448, and 461, Columns D-J]. However, for each of those school districts, PDE’s rating system labeled at least half of the teachers as ineffective. [LR-00458, Tab

2018_2019 LEA SD Totals, Rows 54, 77, 85, 126, 297, 358, 380, 403, 419, 435, 448, and 461, Columns L-O].

456. Notwithstanding these inconsistencies, in 2018-19, PDE gave educator effectiveness ratings to 106,874 teachers. The Department deemed 5,929 of those teachers to be ineffective and 100,945 of them to be effective. The Department therefore rated 94.5% of the teachers as effective. [LR-00458, Tab 2018_2019 LEA SD Totals, Columns L-O].

457. Similarly, on December 13, 2019, Secretary Ortega reported to the U.S. Department of Education that 91.4% of students in Pennsylvania are taught by educators who are rated as “effective” under the alternative educator rating system that the Department developed. [01/18/2022 N.T. at 8806 (Ortega); PX-00061].

458. As PDE noted in the 2019 reporting regarding the educator effectiveness ratings that it generated for federal reporting purposes, Title I public schools across all quartiles, both for students in poverty and non-white students, reported that, for purposes of building-level equity assessments, large majorities of their educators were considered “effective” under the alternative educator rating system. [01/18/2022 N.T. at 8807 (Ortega); PX-00061].

F. System-Wide Results

i. Pennsylvania is a Leader in STEM education

459. In recent years, PDE has focused on investing in STEM education, which is education that is structured around science, technology, engineering and math. [12/1/21 N.T. at 2091-2092 (Stem)]. PDE’s website includes STEM-related resources for school districts and educators, including information about the Computer Science for All Summit, the Governor’s STEM Competition, PA STEM Tool-kit, PA Smart Grants, Pennsylvania’s STEM Ecosystems, and Science Standards. [12/1/21 N.T. at 2094 (Stem); LR-04202-00001].

460. Pennsylvania is a national leader in STEM computer science education. [12/1/21 N.T. at 2092 (Stem); LR-40202-00001]. Pennsylvania is also a nationally-recognized leader in STEM education in light of its regional STEM ecosystems and their collaborative efforts. [12/1/21 N.T. at 2092-2093 (Stem); LR-04202-00002]. Pennsylvania currently has eight STEM ecosystems. [12/1/21 N.T. at 2093-2094 (Stem)]. At one point, among all of the states, Pennsylvania was second only to California for the number of STEM ecosystems. [12/1/21 N.T. at 2093 (Stem)].

461. Through the PA Smart program, new STEM and computer science programs have been introduced into hundreds of schools across Pennsylvania, helping to advance the state to fifth in the nation for the number of STEM graduates. [01/18/2022 N.T. at 8826 (Ortega); LR-01724].

ii. NAEP Assessment Scores

462. As part of the National Assessment of Educational Progress (“NAEP”), tests in English language arts, math, and science are administered every two years to a representative sample of 4th and 8th grade students in Pennsylvania and across the country. [11/30/21 N.T. at 1858 (Stem)].

463. Pennsylvania students often score higher than the national average on the NAEP tests. [11/30/21 N.T. at 1860 (Stem)]. In fact, as indicated by the Nation’s Report Card for Pennsylvania, which reports the state’s NAEP scores, the Commonwealth’s students scored significantly higher than the national average on the following NAEP tests:

- a. 4th Grade math in 2019, 2017, 2015, 2013, 2011, 2009, 2007, 2005, 1996, and 1992.
- b. 8th Grade math in 2019, 2017, 2013, 2011, 2009, 2007, 2005, 2003, 1992, and 1990.

- c. 4th Grade reading in 2019, 2017, 2015, 2013, 2011, 2009, 2007, 2005, 2002, and 1992.
- d. 8th Grade reading in 2017, 2015, 2013, 2011, 2009, 2007, 2005, 2003, and 2002.
- e. 4th Grade science in 2009.
- f. 8th Grade science in 2009.
- g. 4th Grade writing in 2002.
- h. 8th Grade writing in 2007.

[LR-00656].

464. As indicated by the Nation's Report Card for Pennsylvania, the Commonwealth's students scored higher than the national average on the following NAEP tests, although their scores were not significantly different than the national average:

- a. 4th Grade math in 2003
- b. 8th Grade math in 2015
- c. 4th Grade reading in 2003 and 1994
- d. 8th Grade reading in 2019
- e. 8th Grade science in 2011
- f. 8th Grade writing in 2002

[LR-00656].

465. As the Nation's Report Card for Pennsylvania shows, the Commonwealth's students have never scored below the national average in reading or math on the NAEP tests. [LR-00656; 12/2/21 N.T. at 2309-11 (Stem)].

466. Legislative Respondents' expert witness, Mr. Willis, looked at the various sources to assess Pennsylvania's academic achievement, including the Nation's Report Card and *Education Week's* Annual Report Card on School Quality, sometimes referred to as the "Quality Counts" report. This allowed WestEd to compare Pennsylvania to itself over time and also to compare Pennsylvania to other states. [2/10/22 N.T. at 12758 - 59 (Willis)]. Generally speaking, as this analysis shows, Pennsylvania's achievement has increased over time, and recently the Commonwealth has been making some modest progress toward closing academic achievement gaps. [2/10/22 N.T. at 12760 (Willis)].

467. For purposes of the NAEP, students are classified as "eligible students," meaning that they are eligible for free and reduced lunch, or "not eligible students," meaning that they are not eligible for free and reduced lunch. Free lunch eligibility can be seen as a proxy for economic disadvantage. [12/2/22 N.T. at 2400 (Stem)].

468. NAEP scores for Pennsylvania's "eligible" students (*i.e.*, its low-income students) are similar to those for low-income students in other states. For instance, as indicated by the NAEP data for 4th grade reading that appears in the Nation's Report Card, when it comes to low-income students (or "eligible students"), there were only four states with a higher score than Pennsylvania, 43 states with scores were not significantly different than Pennsylvania's, and three states with a lower score than Pennsylvania. [12/2/22 N.T. at 2312-2314 (Stem); LR-03165].

469. As of 2019, Pennsylvania students had the 9th highest scores nationally in 4th grade math, the 16th highest scores nationally in 8th grade math, the 10th highest scores nationally in 4th grade reading, and the 18th highest scores nationally in 8th grade reading. [LRD-6-0005]

470. Between 2005 and 2019, Pennsylvania's NAEP scores in 4th grade reading and math and 8th grade math improved significantly relative to other states. Pennsylvania's NAEP scores in 8th grade reading declined slightly. [2/16/22 N.T. at 14138-40 (Hanushek); LRD-6-0005].

iii. SAT and Advanced Placement Exams

471. For students who graduated in 2020, Pennsylvania SAT takers had a higher average score than the total nationwide group of students who took the exam. [12/2/22 N.T. at 2321 (Stem); LR-01986-00004 and LR-01987-00003]. The average score for Pennsylvania students was 1078, while the average score nationally was 1051. [LR-01986-00004 and LR-01987-00003].

472. For students who graduated in 2020, Pennsylvania SAT takers whose first language was not English, or who first learned both English and another language, had a higher mean score than the nationwide group of students who fit into these categories and took the exam. [LR-01986-00004 and LR-01987-00003]. The average score for Pennsylvania students whose first language was not English was 1066, while the average score nationally for students whose first language was not English was 1055. [LR-01986-00004 and LR-01987-00003]. The average score for Pennsylvania students whose first language was another language coupled with English was 1061, while the average score nationally for this type of student was 1041. [LR-01986-00004 and LR-01987-00003].

473. For students who graduated in 2020, Pennsylvania SAT takers whose parents had lower levels of education had a higher mean score than the nationwide group of students who fit into that category and took the exam. [LR-01986-00004 and LR-01987-00003]. The average score for Pennsylvania students whose parents' highest level of education was below a high school diploma was 935. The average score nationally for this type of student was 919.

[LR-01986-00004 and LR-01987-00003]. The average score for Pennsylvania students whose parents' highest level of education was a high school diploma was 1005. The average score nationally for this type of student was 981. [LR-01986-00004 and LR-01987-00003]. Similarly, the average score for Pennsylvania students whose parents' highest level of education was an associate's degree was 1034. The average score nationally for this type of student was 1019. [LR-01986-00004 and LR-01987-00003].

474. The SAT exam scoring report also provides a "College and Career Readiness Benchmark." The SAT Math benchmark is the score on the math section of the SAT that is associated with a 75% chance of earning at least a C in first-semester, credit-bearing, college-level courses in algebra, statistics, pre-calculus, or calculus. The SAT Evidence-Based Reading and Writing ("ERW") benchmark is associated with a 75% chance of earning at least a C in first-semester, credit-bearing, college-level courses in history, literature, social science, or writing. [LR-01986-00002 and LR-01987-00002].

475. More Pennsylvania students graduating in 2020 who took the SAT exam reached the SAT's College and Career Readiness Benchmarks than the total group of students who took the exam nationally. [LR-01986-00004 and LR-01987-00003]. In Pennsylvania, 74% of SAT test-takers graduating in 2020 met the ERW benchmark and 53% met the math benchmark. Nationally, 66% of test-takers graduating in 2020 met the ERW benchmark, and 48% of test-takers graduating in 2020 met the Math benchmark. [LR-01986-00004 and LR-01987-00003].

476. The number of Pennsylvania students who have taken AP courses has increased over the past several years. [12/2/21 N.T. at 2323-2324 (Stem)]. Independent of their score on an exam, PDE believes that participation in AP courses is beneficial for students. [11/30/21 N.T. at 1741 (Stem)]

477. In addition, the number of students taking AP exams has also increased. In 2018 and 2019, more than 77,000 Pennsylvania students took at least one AP exam (in each year). [12/2/22 N.T. at 2327-2328 (Stem); LR-01913]. Similarly, in both 2018 and 2019, Pennsylvania students took over 138,000 AP exams. [LR-01913].

478. By comparison, in 2009, 47,802 students in Pennsylvania took at least one AP exam. By 2019, 77,481 students in Pennsylvania took at least one AP Exam. Between 2009 and 2019, there were 29,679 more Pennsylvania students taking at least one AP exam (or a 62.1% increase). [LR-01912, “Annual Participation” Tab].

479. A score of 3 or higher on an AP exam is sufficient for a student to obtain college credit for their score on the exam. [12/2/22 N.T. at 2328 (Stem)]. In 2019, 67.8% of Pennsylvania students who took an AP exam scored 3 or higher on the exam. [12/2/22 N.T. at 2327-2328 (Stem); LR-01913]. Only five states in the country had a higher percentage of students who scored 3 or above on AP exams. [12/2/22 N.T. at 2328-2329(Stem); LR-01913].

iv. Other Positive Measures

480. Pennsylvania’s high school graduation rates are above the national average. [12/2/22 N.T. at 2324 (Stem)].

481. In his past works, Petitioners’ expert, Dr. Johnson, has cited to *Education Week’s* Quality Counts report. [1/21/22 N.T. at 9868-69 (Johnson)]. In 2020, Education Week’s Annual Report Card on School Quality graded Pennsylvania as a “C,” which was the 9th highest grade for any state in the nation. [1/21/22 N.T. at 9872-73 (Johnson)].

482. Similarly, Mr. Willis reviewed the 2019 Quality Counts Chance for Success Index Measure, which analyzes a variety of indicators regarding conditions around a student, such as parent education, parent employment, and family income; and then compared Pennsylvania against its selected peer states. This metric also looks at 4th and 8th grade achievement measures,

as well as adult outcomes, such as education level, employment, and stability of employment. Under this metric, Pennsylvania ranked toward the top of its peer states, with a B minus grade. Only two peer states were ahead of Pennsylvania. [2/10/22 N.T. at 12782 - 83 (Willis)].

483. When assessing Pennsylvania's student achievement, Mr. Willis also looked at the Quality Counts K through 12 Achievement Index, which is a source regularly relied upon in the field. The Achievement Index looks at overall level of achievement occurring in a state, changes in that achievement level, and the gaps between certain student groups, specifically the gaps between communities that have higher need versus lower need. [2/10/22 N.T. at 12762-63 (Willis)].

484. The Quality Counts K through 12 Achievement Index includes an equity grade that looks at differences between those student populations that are higher need as compared to other student populations. It considers states' abilities to close the achievement gap and in doing so measures achievement scores. As Mr. Willis explained, by looking at how achievement changes over time, one is provided with much more information about the efforts that a state is making to help students achieve at greater levels. Quality Counts assigns a letter to its equity grade. Pennsylvania achieved a B. This compares relatively favorably to other states. [2/10/22 N.T. at 12765 - 66 (Willis)].

485. Statewide, the percentage of students who score Competent or Advanced on NOCTI and other assessments that are given to CTE students, in particular, has been increasing. In 2006, 55% of Pennsylvania CTE students scored competent or advanced on NOCTI and similar assessments. In 2010, 70% of Pennsylvania CTE students scored competent or advanced on NOCTI and similar assessments. And in 2017, 84% of Pennsylvania CTE students scored competent or advanced on NOCTI and similar assessments. [LR-04216-00006]. PDE attributes

this increase to the continuous cycle of CTE program reviews, professional development, and leadership development that is provided through the Pennsylvania Technical Assistance Program. PDE does not attribute the improvements in scores to an increase in funding for CTE programs. [LR-04216-00006].

VI. PETITIONER SCHOOL DISTRICTS

486. At trial, Petitioners presented testimony regarding the education provided at each of the Petitioner school districts. Each of the Petitioner school districts presented the testimony of their current superintendent and some Petitioners presented the testimony of other school district witnesses, such as teachers, business managers or former superintendents.

487. During her testimony, one former superintendent observed: “You know, when you’re a superintendent, your whole role is to be the chief storyteller....” [01/07/2022 N.T. at 7346-47 (Harbert); LR-01948].

488. Petitioners understandably placed the emphasis on what was “bad” in each districts, leaving gaps in the data. For instance, although Petitioners presented testimony about average class sizes or outdated text books in some classes in certain districts, no testimony was given about the same topics in the other Petitioner districts or, for that matter, in the other 490+ school districts in Pennsylvania.

A. Greater Johnstown School District

i. Background

489. Petitioners presented the testimony of Dr. Amy Arcurio (“Dr. Arcurio”), Stephanie Kobal (“Ms. Kobal”) and Eric Kocsis (“Mr. Kocsis”). Dr. Arcurio is the Superintendent of the Greater Johnstown and has held that position since November 2018. [12/2/21 N.T. at 2541 (Arcurio)]. Ms. Kobal is a first-grade teacher at Greater Johnstown. She has been teaching at Greater Johnstown for twenty-five years. During her tenure at Greater Johnstown, she has held

jobs as a Title I instructor, a Kindergarten teacher, a third-grade teacher, and an intervention coordinator. [12/8/21 N.T. at 3294-95 (Kobal)]. Mr. Kocsis is the former Business Manager of Greater Johnstown. He held that position from November 2016 to June 2020. He is currently the business manager and board secretary at Ligonier Valley School District. [12/10/21 N.T. at 3902–03 (Kocsis)].

490. Greater Johnstown encompasses the City of Johnstown, which is ranked the poorest city in Pennsylvania. Johnstown’s median household income is \$24,415.00, while the statewide median household income is \$53,599.00. [LR-00090-00085].

491. In the 2020–2021 school year, Greater Johnstown had 2,881 students. [LR-05007A-00005].

492. Greater Johnstown operates in four buildings: an elementary, middle, and high school and a central administrative office. The elementary school includes kindergarten through fourth grade and accommodates 1,200 students. The middle school includes grades five through seven and has about 650 students. The high school includes grades eight through twelve, was built in 2002, and has approximately 900–1000 students. [12/3/21 N.T. at 2569–70, 2575, 2580, 2648–49, 2667, 2685-86; 12/7/21 N.T. at 3051-52; (Arcurio)].

493. U.S. News and World Report has ranked Greater Johnstown High School a bronze award winner for at least nine years, which signals that the school is one of America’s best high schools. [12/7/21 N.T. at 2955–59 (Arcurio)].

494. Between 2017 and 2021, Greater Johnstown’s student enrollment declined by 114 students. [12/10/21 N.T. at 4123 (Kocsis); LR-05007A-00005]. Despite this decline in enrollment, Greater Johnstown’s revenue increased by \$3,855,063 during the same time period. [12/10/21 N.T. at 4134–36 (Kocsis); LR-05008].

495. Outside of school, Greater Johnstown students face a variety of challenges that can affect their learning, including homelessness, incarceration, addiction, food insecurity, and poverty. For the 2019–2020 school year, 85.75% of Greater Johnstown students were classified as economically disadvantaged; 0.99% of them were classified as ELL; and 18.54% of them were classified as special education. [12/3/21 N.T. at 2570, 2581–83, 2586 (Arcurio); PX-04807].

496. In the 2019–2020 school year, Greater Johnstown’s student body was 41.43% White, 4.8% Hispanic, 35.82% Black, and 0.24% Asian. [PX-04807].

497. Greater Johnstown is a part of Appalachia Intermediate Unit 8. The IU provides psychological and social services to Greater Johnstown students and provides professional development and pedagogy training for new teachers in the district. [12/7/21 N.T. at 3032, 3129–30, 3132 (Arcurio)].

ii. Academic Offerings/Curricula

498. Greater Johnstown offers all statutorily required courses to its students in all grade levels. [12/7/21 N.T. at 3037 (Arcurio)].

499. Greater Johnstown requires its elementary school students to take certain core classes, including English Language Arts, math, reading, science, spelling, social studies, and writing. Greater Johnstown also requires its elementary school students to take “specials” classes in music, art, physical education, library, and STEAM (Science, Technology, Engineering, Art, and Math). [12/7/21 N.T. at 3032 (Arcurio); LR-00086].

500. Greater Johnstown requires its middle school students to take courses in English, math, reading, science, social studies, art, physical education, music, STEM, and computers. [12/7/21 N.T. at 3024 (Arcurio); LR-00087].

501. To graduate from the district, Greater Johnstown high school students must earn four credits in English, four credits in mathematics, three credits in science, four credits in social studies, one credit in health and wellness, one credit in strategic reading or composition and writing, four credits in advisement (career exposure), and eight elective credits. [12/7/21 N.T. at 3008–10 (Arcurio)].

502. Greater Johnstown’s course offerings exceed the applicable statutory requirements. [12/7/21 N.T. at 3037–38 (Arcurio)].

503. At the high school level, Greater Johnstown students can take a variety of challenging elective classes, including, for example, Introduction to Business and Management Principles. The Management Principles class: “Presents the principles, techniques and concepts needed for managerial analysis and decision-making. It highlights the functions of planning, organizing, influencing and controlling behavior in the organization. Principles of organization development are introduced.” [12/7/21 N.T. at 2930–32 (Arcurio); LR-03115-00007 to 00008].

504. As another example, the district’s high school students can take Microcomputer Applications, which, as Dr. Arcurio confirmed, is accurately described in the school’s 2021 Course Guidelines as follows:

This hands-on course introduces the student to the more popular microcomputer software packages available including Windows, word processing, spreadsheets and presentations. This course provides students with a working knowledge of these software packages to accomplish the more common tasks. The Microsoft Office Suite, MS Word, MS Excel and MS PowerPoint is used.

[12/7/21 N.T. at 2933 (Arcurio); LR-03115-00008].

505. As Dr. Arcurio confirmed, another high school elective, Introduction to Sociology, is accurately described in the 2021 Course Guidelines as follows: “This course introduces the basic sociology concepts and theories with emphasis on application of these

concepts to the understanding of American institutions, politics, economics, religion, education, marriage and the family.” [12/7/21 N.T. at 2936 (Arcurio); LR-03115-00010].

506. In the 2018-19 school year, 82.4% of Greater Johnstown High School students took rigorous courses of study, which are college courses, Advanced Placement (“AP”) courses, and Career and Technical Education (“CTE”) courses. This percentage exceeds the statewide average by about 25%. [12/8/21 N.T. at 3224–25 (Arcurio); PX-02886-00009].

507. Within Pennsylvania, Greater Johnstown High School is one of only a small number of “comprehensive high schools,” which are high schools that provide their own vocational programming to students. [12/7/21 N.T. at 2961–62 (Arcurio)].

508. As a comprehensive high school, Greater Johnstown High School has thirteen on-campus vocational programs in the following career areas: automotive body repair; automotive mechanic; construction trades; child care; computer technology/PC maintenance; cosmetology; engineering technology; graphic arts/commercial art; health and medical assisting-nurse’s aide; health professions/allied health; institutional food worker/culinary arts; welding; and, diversified occupations, a flexible job-training program. [12/7/21 N.T. at 3012–13 (Arcurio); LR-01884].

509. Greater Johnstown has a dual-enrollment program and an associate’s degree program.

510. As part of the dual-enrollment program, Greater Johnstown’s students can take college-level courses and earn college credits while they are still in high school. [12/7/21 N.T. at 2909–10 (Arcurio)]. Through the associate’s degree program, Greater Johnstown’s students can obtain an associate’s degree while they are still in high school. [12/7/21 N.T. at 2909–10 (Arcurio)].

511. Greater Johnstown covers the costs for its students to take the college-level courses that are involved in the dual-enrollment and associate's degree programs. [12/2/21 N.T. 2551; 12/7/21 N.T. at 2910 (Arcurio)].

512. In each of the past several years, an average of twelve to twenty-four students graduated from Greater Johnstown with an associate's degree. A fair estimate is that, in 2019, approximately 12% of Greater Johnstown students graduated with an associate's degree. [12/7/21 N.T. at 2911 (Arcurio)].

513. Students who are enrolled in Greater Johnstown's dual-enrollment program have the opportunity to take their dual-enrollment classes through the Pennsylvania Highlands Community College, Indiana University of Pennsylvania, the University of Pittsburgh at Johnstown, and Mount Aloysius College. [12/7/21 N.T. at 2932, 2948, 2952, 2954–55 (Arcurio)]. Penn Highlands Community College is the college that provides most of the dual-enrollment courses and credits. [12/7/21 N.T. at 2910 (Arcurio)].

514. Through its dual enrollment program, Greater Johnstown offers students the opportunity to complete a variety of challenging and sophisticated college-level courses in order to obtain college credits. Those courses include, among numerous other examples, the following ones: Anatomy and Physiology; AP U.S. History 1; AP U.S. History 2; 3D and 2D Art; AP Calculus; Computer Applications; AP Psychology; Sociology; Effective Communications Skills and Computer Applications; and, P.C. Maintenance Levels 1, 2, and 3. [12/7/21 N.T. at 2917–21 (Arcurio); LR-03114].

515. Greater Johnstown is a party to the Pennsylvania Statewide Articulation Agreement and its students may therefore obtain CTE credits from postsecondary institutions while they are still in high school. [12/7/21 N.T. at 3018–19 (Arcurio)].

516. As Greater Johnstown highlights in its 2019–2022 Comprehensive Plan, it has one of the best dual-enrollment programs and one of the best associate’s degree programs in the Commonwealth: “JHS [Johnstown High School] is in the top two schools in the Commonwealth when examining the number of students taking college credits while in high school, as well as the number of students enrolled in the associate degree program while in high school.” [12/7/21 N.T. at 2914 (Arcurio); Ex. No. LR-00090-00005].

517. Students at Greater Johnstown High School likewise have the opportunity to take AP classes. Approximately 10% of the school’s juniors and seniors take these classes, and Greater Johnstown covers the cost for them to take the AP exams, which enables them to obtain college credits if they achieve a certain score on those tests. [12/3/21 N.T. at 3162, 3166 (Arcurio)].

518. Greater Johnstown High School, in fact, offers 12 different AP classes. [LR-00188-00025].

519. Students at the Greater Johnstown High School can participate in the Summit Learning Academy, which involves project-based learning, one-on-one mentoring, and individualized educational pathways. Approximately thirty students per grade level are involved in the Summit Learning Academy. Through the Summit Learning Academy, students have the opportunity to take various additional online elective courses. [12/7/21 N.T. at 2992–95 (Arcurio); LR-00127].

520. As Dr. Arcurio confirmed, the following description of the Summit Learning Academy is an accurate one:

Summit learning combines core values what science tells us on how students learn best and cutting-edge research into a school experience that is tailored to every community’s needs. Summit Learning has three pillars to the student experience: 1: Project-based

learning. Students spend a majority of their time working alongside teachers and classmates on rich real world projects. 2: One-on-one mentoring. Students meet weekly with a mentor to ensure daily actions and progress align with long-term goals. 3: Individualized pathways. Students are empowered to set goals and deeply understand content by consuming it in a way that is best for them.

[12/7/21 N.T. at 2992–93 (Arcurio); LR-00127].

521. Greater Johnstown has its own cyber school. Through this school, the district offers the same courses as its brick-and-mortar schools as well as some additional elective courses. [12/3/21 N.T. at 2797; 12/7/21 N.T. at 2965 (Arcurio)].

522. Through its 21st Century Career Training and Preparation Program, Greater Johnstown gives its high school students job-shadowing and internship experience and, through the Everfi program, it affords them the opportunity to obtain financial literacy. [12/7/21 N.T. at 3019 (Arcurio)].

523. Greater Johnstown’s high school organizes students into various “Pathways to Success,” which are courses of study that are organized around different careers or areas of interest. The high school has established the following Pathways to Success, in particular:

- a. 8th Grade Academy
- b. Art and Communication
- c. Health and Human Services
- d. Engineering, Manufacturing, and Technology
- e. Accelerated College Education
- f. Associates Degree in High School-General Studies
- g. Associates Degree in High School-Small Business Management
- h. Summit Learning Academy at Johnstown High School

[12/7/21 N.T. at 2990 (Arcurio); LR-00127, LR-01884-00021 to 00024].

524. Greater Johnstown, in addition, offers an alternative education program. The program is focused on educating students who have issues with discipline. Separately, it allows Greater Johnstown's cyber school students to visit a school building in order to receive in-person instruction, if they wish to do so. [12/7/21 N.T. at 2988–89].

iii. Teachers and Staff

525. As of 2019, Greater Johnstown employed 191 teachers, all of whom the district rated as satisfactory. [LR-05007A-00002]. Greater Johnstown meets the teacher-staffing requirements that the Pennsylvania Department of Education has established, including all of the requirements regarding special education teachers. [12/3/21 N.T. at 2588, 2592 (Arcurio)].

526. As of 2021, the average Greater Johnstown classroom teacher had 15.7 years of teaching experience. The average teaching experience of Greater Johnstown's classroom teachers has increased over the last nine years. In the 2012-13 school year, the average Greater Johnstown classroom teacher had 14.7 years of teaching experience. In the 2020-21 school year, Greater Johnstown's classroom teachers had the highest level of teaching experience that they have had over the past nine years, except for the 2019-20 school year, when they likewise had an average of 15.7 years of teaching experience. [LR-05007A-00006].

527. As of 2021, the average Greater Johnstown classroom teacher has taught in Greater Johnstown for 15.4 years. The average time a Greater Johnstown classroom teacher has taught in Greater Johnstown has increased over the past nine years. In the 2012-13 school year, the average Greater Johnstown classroom teacher had taught in the district for 13.5 years. [LR-05007A-00006].

528. As of 2021, the average Greater Johnstown classroom teacher earned a salary of \$67,182.02. The average salary for Greater Johnstown's classroom teachers has

increased over the last nine years. In the 2012-13 school year, the average Greater Johnstown classroom teacher earned a salary of \$61,040.82. In the 2020-21 school year, the average salary for Greater Johnstown's classroom teachers reached its highest level in the past nine years. [LR-05007A-00006].

529. In the 2019-20 school year, the salaries for full-time Greater Johnstown teachers ranged from \$49,997 to \$75,286. The top end of that teacher salary range is therefore over three times higher than the median household income for Johnstown families. The upper end of the pay scale for Greater Johnstown administrators (including principals and business personnel) is \$136,000, more than five times as high as the median household income for families who live in Johnstown. [12/7/21 N.T. at 3042–43, 3045-48, 3050 (Arcurio); PX-00155].

530. As of September 2019, Greater Johnstown offered the highest starting teacher salary of any school district in its intermediate unit, which is IU-8. IU-8 includes all of the 35 school districts that are located in Cambria, Somerset, Bedford, and Blair Counties. [12/7/21 N.T. at 3045 (Arcurio); LR-03161-00042].

531. Greater Johnstown also compensates its teachers for assisting with extracurricular activities. For example, the district pays \$9,183 to the head football coach, \$5,984 to the high school band director, \$1,837 to the high school scholastic quiz team advisors, and \$500 to the elementary school Lego League Jr. coach. [12/10/21 N.T. at 4048–51 (Kocsis); PX-04515].

532. Greater Johnstown provides its teachers with a comprehensive health insurance plan, including, for example, 100% coverage for the costs of retail and mail-order drugs after the deductible. For the current school year (2021-22), moreover, for each person who is covered by the plan, Greater Johnstown deposited 81% of the amount of the deductible into a Health Savings Account. The result is that teachers who have individual coverage are responsible

for only \$285 in deductible payments each year. [12/10/21 N.T. at 4057, 4060, 4062 (Kocsis); PX-04515-0029, 0031, 0032].

533. Greater Johnstown provides each of its teachers with life insurance coverage in the amount of \$65,000. [12/10/21 N.T. at 4067 (Kocsis); PX-04515-0033, 0041].

534. Greater Johnstown pays its teachers \$30 per hour to work on writing curriculum, which is in addition to their regular salary. [12/10/21 N.T. at 4039–40 (Kocsis); PX-04515-0034].

535. Greater Johnstown provides its teachers with all of the teaching-related professional development opportunities that they are required to receive. [12/3/21 N.T. at 2721 (Arcurio)].

536. Greater Johnstown trains all of its teachers on Positive Behavior Intervention and Support, which is a program through which the district focuses on and reinforces its students' positive behaviors. As part of the program, students are given "Trojan bucks" for good behaviors, and they can redeem those "bucks" for prizes or special activities. [12/8/21 N.T. at 3360 (Kobal)].

537. Some of Greater Johnstown's teachers participate in the district's after-school programs. The teachers who participate in the after-school Student Assistance Program, for example, receive compensation for doing so (beyond their base salaries). [12/10/21 N.T. at 4040–41 (Kocsis); PX-04515-0029].

538. Between 2017 and 2020, Greater Johnstown increased its total employee workforce from 308 to 310, despite the closure of the Garfield Middle School and a decline in enrollment (from 3,054 to 2,940) during that time. [12/10/21 N.T. at 4130, 4123 (Kocsis); LR-05007A-00008 and LR-05007A-00005].

539. As of 2021, 98 out of 224 (or 43.8%) of Greater Johnstown's professionals (including teachers) have a master's degree or higher. [LR-05007A-00007].

540. Greater Johnstown has one STEAM-specific teacher for its elementary school and another one for its middle school. [12/7/21 N.T. at 3038; 12/3/21 at 2656 (Arcurio)].

541. Greater Johnstown has five music teachers. [12/3/21 N.T. at 2764-65 (Arcurio)].

542. Greater Johnstown has two English as a Second-Language teachers to serve its English language learners (who make up only 0.99% of the student body). [12/7/21 N.T. at 3038, 3122 (Arcurio); PX-04807].

iv. Facilities

543. Greater Johnstown's elementary school has a shared auditorium/gymnasium space where school performances take place. [12/3/21 N.T. at 2659 (Arcurio); LR-00086].

544. Although Greater Johnstown's Superintendent, Dr. Arcurio, testified that the Garfield Middle School was closed because it "was beyond repair and was a building that had so many significant issues," and that "our population of students didn't decrease," the district, in fact, has been losing students for decades, with a student population decline of 114 students between 2017-18 and 2019-20 alone. The amount of this decline is equal to over half the size of a typical cohort of the district's students. [12/3/21 N.T. at 2640, 2689; 12/7/21 N.T. at 3062, 3064 (Arcurio)].

545. While certain photographs depict missing ceiling tiles and peeling paint within the Garfield Middle School, those photographs were taken after the school had been closed. [PX-00276, PX-00267, PX-00270]. Greater Johnstown no longer uses this building and is seeking to sell part of it. [12/3/21 N.T. at 2673-75 (Arcurio); 12/8/21 N.T. at 3266 (Arcurio)].

546. Greater Johnstown expects to recoup \$300,000 from the sale of part of the Garfield Middle School building. [12/7/21 N.T. at 3061 (Arcurio)].

547. By closing the Garfield Middle School, Greater Johnstown has realized over \$1 million in savings, exceeding estimates. [12/10/21 N.T. at 3988 (Kocsis)].

548. Greater Johnstown teacher Stephanie Kobal testified that, in the district's elementary school, the bathroom that is closest to her classroom only one toilet; however, another set of bathrooms is located down a short hallway from her classroom. [12/8/21 N.T. at 3356–57, 3262 (Kobal)].

549. Greater Johnstown recently replaced its football stadium lights at a cost of \$393,000, which it took out of its general budget. [12/8/21 N.T. at 3262 (Arcurio); LR-01887, “ESSERS II” Tab].

550. There is no evidence in the record that Greater Johnstown's schools or other facilities are unsafe or otherwise unsuitable as places for students to learn.

v. Instrumentalities of Learning

551. Greater Johnstown has assigned a Chromebook laptop to every one of its students. Since December of 2020, in fact, the district has maintained a one-to-one ratio of students to Chromebooks. [12/3/21 N.T. at 2775 (Arcurio)].

552. All three of Greater Johnstown's schools have Wi-Fi functionality. [12/7/21 N.T. at 3078 (Arcurio)].

553. Using ESSER funds, Greater Johnstown purchased over 300 WiFi hotspots for distribution to its students' households. [12/7/21 N.T. at 3083 (Arcurio)].

554. Greater Johnstown's middle and high schools have computer labs, which are outfitted with desktop computers. [12/7/21 N.T. at 3079 (Arcurio)].

555. There are desktop computers in the STEAM classroom in Greater Johnstown's elementary school. [12/7/21 N.T. at 3079–80].

556. Almost every one of Greater Johnstown's classrooms has a Smartboard. [12/7/21 N.T. at 3080–81 (Arcurio)].

557. For its middle school and high school, Greater Johnstown plans to purchase a subscription to a digital library, called Sora, which will enable students to access a suite of literature and textbooks. [12/7/21 N.T. at 3084 (Arcurio)].

vi. Finances

558. In 2020, Greater Johnstown spent \$16,345.68 per ADM. [LR-05008].

559. In 2020, Greater Johnstown had revenue of \$17,325.45 per ADM, ranking it 317 out of Pennsylvania's 500 school districts. [PX-04829].

560. For the 2019-20 school year, Greater Johnstown received \$2,759,296 more in revenue than the amount that it spent. [LR-05008].

561. For the 2021-22 school year, Greater Johnstown plans to spend a total of \$66,809,618. [PX-04516-0013].

562. For the 2021-22 school year, Greater Johnstown has budgeted to spend \$1,063,359 on sports and other extracurricular activities. [PX-04516-0013].

563. For the 2021-22 school year, Greater Johnstown has budgeted to spend \$903,817 on its pre-kindergarten program. [PX-04516-0015].

564. As shown in its current budget, Greater Johnstown projects that, at the end of the 2021-2022 school year, the amount of its unassigned fund balance will be \$9,570,418. [PX-04516-0025].

565. For the 2021-22 school year, Greater Johnstown projects that it will receive \$34,922,877 from state sources, \$11,789,924 from local sources, \$19,179,228 from federal

sources, and \$188,937 from other financing sources. [PX-04516-0006 to 0007]. It is therefore projecting that it will receive almost three times as much revenue from state sources as local sources.

566. For the 2019-20 school year, Greater Johnstown received \$33,538,379 from state sources, \$13,408,546 from local sources, and \$4,858,549 from federal sources. [12/10/21 N.T. at 4092–94 (Kocsis); PX-04513-0014].

567. Between 2014 and 2020, Greater Johnstown’s total revenue increased by \$9,615,225.54. [LR-05009].

568. Although, during the 2016-17 school year, Mr. Kocsis contended that Greater Johnstown was headed towards insolvency, in reality, by the end of that year, the district had accumulated a fund balance of \$3.2 million after receiving delinquent tax payments that were owed to it. [12/10/21 N.T. at 3943–44 (Kocsis)].

569. For the 2019-20 school year, Greater Johnstown stated in its budget that, at the beginning of the year, it had \$2.4 million in its unassigned fund balance. In its annual financial report for the 2018-19 school year, however, Greater Johnstown reported that it had an end-of-year unassigned fund balance of about \$4.7 million, which was nearly double what it identified as the beginning unassigned fund balance in its budget for the 2019-20 school year. [12/10/21 N.T. at 4085–86 (Kocsis); PX-00261-0008].

570. In the 2019-20 school year, Greater Johnstown’s general fund and capital project fund grew from \$6,315,686 to \$9,259,631 due, in part, to its receipt of delinquent tax payments from a local hospital. According to Mr. Kocsis, this increase also stemmed from the fact that, during that school year, Greater Johnstown experienced a variety of COVID-related savings that resulted from the cancellation of spring sporting events, reduced transportation costs,

and a lower need for substitute teachers. [12/10/21 N.T. at 4007–08, 4099 (Kocsis); PX-04513-0019].

571. For the 2016-17 school year, Greater Johnstown ran a deficit, with its expenditures per ADM exceeding its revenue per ADM by about \$400. More recently, however, Greater Johnstown's revenue per ADM has exceeded its expenditures. For the 2018-19 school year, its excess revenue per ADM reached approximately \$500. In the 2019-20 school year, due in part to federal COVID relief money and a large real estate transfer tax payment, the excess revenue per ADM was almost \$1,000. [12/10/21 N.T. at 4134–36 (Kocsis); LR-05008].

572. In the past 25 years, Greater Johnstown has raised the property tax rate that it imposes only once. [12/3/21 N.T. at 2595 (Arcurio)].

vii. Extracurricular Activities and Athletics

573. As of 2021, Greater Johnstown High School provided its students with opportunities to participate in sports, including volleyball, soccer, football, basketball, wrestling, hockey, track and field, softball, baseball, and volleyball. [12/7/21 N.T. at 3007 (Arcurio); LR-01884].

574. Greater Johnstown also provides its high school students with opportunities to participate in musical and performance-based extracurricular activities, including band/orchestra, chorus, interact club, pep club, marching band, corral, percussion ensemble, jazz band, and color guard. [12/7/21 N.T. at 3006, 3124 (Arcurio)].

575. Greater Johnstown High School provides its students with opportunities to participate in other types of extra-curricular activities, including yearbook, key club, forensics, welding club, star club, scholastic quiz team, E-Sports, Entrepreneur Club, SWPBIS Club, and STRIDE Club. [12/7/21 N.T. at 3006, 3124 (Arcurio); Declaration of Amy Arcurio ¶ 48 (Sept. 1, 2021)].

576. Greater Johnstown provides its middle school students with opportunities to participate in band, chorus, and orchestra. It also affords them opportunities to take small-group music lessons for a variety of musical instruments. [12/7/21 N.T. at 3025 (Arcurio)].

577. Greater Johnstown, in addition, offers the following clubs and similar extracurricular activities to students and parents: Power Up Nutrition, Education Adagio, Bocce Ball, Strengthening Families, Tales for Tails, Junior Achievement, Good Touch Bad Touch, Backpack Project, One Book One Community, Truancy Intervention Program (SAIP), School Climate Survey, 21st Century After School Programming (Tutor and Credit Recovery), Student Assistance Program, Summer in the City, Communities in Schools, National Honors Societies, Foster Care program, Homelessness program, Fishing Club, Forensics, Art Club, Pep Club, Interact Club, Key Club, Drama/Musical, NAACP, Builders Club, JHS Pep Club, Kiwanis Kids, National Junior Honor Society, SkillsUSA, FIRST Lego League, FIRST Tech Challenge, Math Challenge 24, and Scholastic Quiz. [Greater Johnstown's Supplemental Response to Senator Scarnati's Fifth Set of Interrogatories, Interrogatory No. 1 (Feb. 18, 2020); Greater Johnstown's Response to Senator Scarnati's Fifth Set of Interrogatories, Interrogatory No. 1 (Dec. 16, 2019)].

viii. Class Size

578. In the 2020–21 school year, Greater Johnstown had a student-classroom teacher ratio of 14.9-to-1 and a student-staff (reported personnel) ratio of 9.0-to-1. [LR-05007A-00009].

579. Greater Johnstown caps the size of its high school classes at 30 students. [12/7/21 N.T. at 3091 (Arcurio)].

ix. Student Supports

580. Greater Johnstown has 27 intervention specialists at its elementary school. [12/3/21 N.T. at 2572 (Arcurio)].

581. Greater Johnstown has four behavioral interventionists at its elementary school, three at its middle school, and two at its high school, along with seven school counselors and school therapists at both the middle and high school. [12/3/21 N.T. at 2738, 2745–46; 12/7/21 N.T. at 3115 (Arcurio)].

582. Greater Johnstown has two reading specialists at its elementary school. [12/3/21 N.T. at 2620 (Arcurio)].

583. Greater Johnstown's elementary school has a librarian. [12/3/21 N.T. at 2666 (Arcurio)].

584. Greater Johnstown recently hired three reintegration specialists (truancy officers) for the reintegration of students after the remote learning that took place during the COVID-19 pandemic. [12/7/21 N.T. at 3110-11 (Arcurio)].

585. Greater Johnstown has fifty-three paraprofessionals on its staff. While it also has fully-funded openings for additional support personnel, it has been unable to fill those positions due to a lack of applicants. [12/7/21 N.T. at 3087, 3107; 12/3/21 N.T. at 2743 (Arcurio)].

586. In November 2021, Greater Johnstown hired a resource officer (in essence, a police officer) for its elementary school. The middle and high schools already had resource officers. [12/7/21 N.T. at 3111-12 (Arcurio)].

587. Greater Johnstown has two full-time psychologists and a psychologist who is compensated on a per-diem basis. [12/7/21 N.T. at 3112–13 (Arcurio)].

588. Greater Johnstown has a fully-funded opening for a third full-time school psychologist, but it has been unable to fill the position. [12/7/21 N.T. at 3113 (Arcurio)].

589. Greater Johnstown has after-school tutoring programs at all three of its schools.

590. At the high school level, the after-school tutoring program is called Afterschool Live. It is designed to help Greater Johnstown's high school students with their homework and credit recovery efforts. The program runs Mondays through Thursdays. [12/7/21 N.T. at 2978 (Arcurio)].

591. At the middle school level, Greater Johnstown's after-school tutoring program is likewise known as Afterschool Live. It is designed to provide Greater Johnstown's middle school students with homework assistance from tutors, course recovery, and recreation time with community partners. The program runs Mondays through Thursdays. [12/7/21 N.T. at 2980–81 (Arcurio)].

592. Greater Johnstown also has an after-school tutoring program at the elementary school level. This program is known as the Trojan Learning Center. The program is designed to provide Greater Johnstown's elementary school students with homework help, tutoring in reading and math, STEM activities, and recreation. The program runs Mondays through Thursdays. [12/7/21 N.T. at 2981–82 (Arcurio)].

593. Also, through each of its after-school tutoring programs, Greater Johnstown provides its students not only with academic assistance, but also with a nutritionally-balanced dinner. [12/7/21 N.T. at 2977–82 (Arcurio)].

594. At the Johnstown Elementary School, lower-scoring readers receive small-group instruction from a certified reading interventionist. [12/8/21 N.T. at 3317-18 (Kobal)].

595. Greater Johnstown offers a summer school program to its students. The program allows the district's high school students to recover credits. It also allows academically unsuccessful middle school students to receive extra learning opportunities. [12/7/21 N.T. at 2985 (Arcurio)].

596. For the 2021-22 school year, Greater Johnstown plans to offer a summer school program at its elementary school as well.

597. Greater Johnstown offers the “Trojan College Access Program,” which helps its students and their parents with college preparation activities, including the completion of applications for college admissions and scholarships. [12/7/21 N.T. at 3105–06 (Arcurio)]. The district also offers a FAFSA Completion Night, College Fair, and College Partnership Day. [Greater Johnstown Supplemental Response to Senator Scarnati’s Fifth Set of Interrogatories, Interrogatory No. 1 (Feb. 18, 2020) (Senator Scarnati preceded Senator Corman as President *pro tempore* of the Pennsylvania Senate)].

598. Greater Johnstown also emphasizes social and emotional learning through a partnership with United Way, which focuses on cooperative learning, getting along, and making healthy lifestyle choices. It also provides a “Getting Along Together” curriculum in its elementary school, which incorporates social and emotional learning into the reading Tier 1 curriculum. [12/7/21 N.T. at 3100–02 (Arcurio)].

599. All three of Greater Johnstown’s schools are “community schools,” which means that they partner with local health and social services providers in order to offer services to support students’ mental, behavioral, and physical health. [12/7/21 N.T. at 3094–95 (Arcurio)].

600. Greater Johnstown has community school directors, who act as “concierges” for the provision of services by, for example, arranging for eye exams and eyeglasses to be provided to students free of charge. [12/7/21 N.T. at 3108–10 (Arcurio)].

601. Additionally, Greater Johnstown provides all of its students with access to free breakfast and lunch. [12/7/21 N.T. at 3088–89 (Arcurio)].

602. Greater Johnstown Elementary School has a certified service dog. [12/8/21 N.T. at 3361 (Kobal)].

603. Dr. Arcurio could not say exactly how many non-instructional support professionals—*e.g.*, counselors, reengagement specialists, therapists, social workers—Greater Johnstown needs in its schools. Dr. Arcurio, similarly, could not articulate any objective standard that could be applied to determine how many social workers the district should hire in order to improve student academic outcomes. [12/7/21 N.T. at 3115, 3119 (Arcurio)].

x. Pre-K

604. Greater Johnstown offers a pre-K program. It uses Pre-K Counts dollars and grants to run the pre-K program. The Commonwealth provides the district with those Pre-K Counts dollars and grants. Greater Johnstown’s pre-K program is carried out at the Morrell Neighborhood Preschool. [12/7/21 N.T. at 2986 (Arcurio)].

605. For the 2019-20 school year, Greater Johnstown did not turn away from its pre-K program any child who met the age and income requirements for participating in the program. The same thing is true for the 2021-22 school year. [12/7/21 N.T. at 2987 (Arcurio)].

xi. Student Outcomes

606. Greater Johnstown’s student body is a transient population, and diagnostic tools like standardized tests do not account for variations that occur in the population as students move in and out of the district. In fact, in one recent school year, about 400 elementary school students moved into or out of Greater Johnstown. [12/7/21 N.T. at 3065, 3072 (Arcurio)].

607. Dr. Arcurio provided the following testimony to the Pennsylvania Senate:

“What we need more, though, is a growth model that children grow under the time that they’re with that particular teacher or within that particular school . . . within each and every one of those children is an individual learner with their own sets of needs and issues. And

when we standardize anything, we believe that every children's – every child is exactly the same and learns in exactly the same way.”

[12/8/21 N.T. at 3228, 3237–39 (Arcurio); LR-02291].

608. As Dr. Arcurio similarly explained during the trial in this matter:

“[PVAAS scores measure] growth, and – a growth standard, and I stand by that, I think that, you know, growing students is extremely important . . . So, we focus on growth, because we know that if students are given a caring teacher, a teacher that knows what that student needs, they are able to grow them . . . So we use PVAAS data in that way. We make a difference to kids when they're with us.”

[12/8/21 N.T. at 3287–88 (Arcurio)].

609. Ms. Kobal testified that raw standardized test scores do not reveal how well Greater Johnstown is teaching its students; she believes that “[g]rowth gives a better picture of how [students are] doing throughout the school year.” [12/8/21 N.T. at 3352 (Kobal)].

610. Greater Johnstown High School's PVAAS growth score (which measures academic growth) in 2018-2019 for English Language Arts was 90, which exceeds the statewide average growth score by fifteen points and the “meeting statewide growth standard” by twenty points. [12/8/21 N.T. at 3221-22 (Arcurio)]. Similarly, in 2018-2019, Greater Johnstown High School exceeded the statewide average growth scores for Mathematics-Algebra and Industry-based Learning. [12/8/21 N.T. at 3222–24 (Arcurio)].

611. In the 2018-19 school year, 99.92% of Greater Johnstown elementary school students were promoted to the next grade level, along with 99.51% of the district's middle school students. [LR-05007A-00004].

612. For the 2018–19 school year, 69.8% of grades for students at Greater Johnstown's high school, and 87.1% of grades for students at its middle school, were an A, B, or C. [LR-05091A-00002].

613. Students graduate from Greater Johnstown at rates that are similar to the state averages. [LR-05010]. In the 2019-20 school year, 77.27% of Greater Johnstown's students in the four-year cohort graduated and 83.41% of its students in the five-year cohort graduated. Likewise, in the 2018-19 school year, 79.92% of Greater Johnstown's students in the four-year cohort graduated and 91.28% of its students in the five-year cohort graduated. In the 2017-18 school year, 86.43% of Greater Johnstown's students in the four-year cohort graduated and 85.45% of its students in the five-year cohort graduated. [LR-05007A-00003].

614. In 2020, 48.89% of Greater Johnstown graduates planned to attend post-secondary institutions, 12.2% enlisted in the military, and 40.9% entered the workforce. [LR-05007A-00010 to 00011].

B. Lancaster School District

i. Background

615. Petitioners presented the testimony of Damaris Rau ("Dr. Rau"), Matthew Przywara ("Mr. Przywara"), and Amanda Aikens ("Ms. Aikens"). Additionally, the parties designated the deposition testimony of Christopher Lopez ("Mr. Lopez"), who was not called as a witness at trial.

616. Dr. Rau is Lancaster's superintendent. She has held that position for six and a half years. [12/16/21 N.T. at 5032–33 (Rau)].

617. Mr. Przywara is Lancaster's chief of finance and operations. He has been at Lancaster for over fourteen years. As the chief of finance and operations, Mr. Przywara is in charge of all of the district's budgetary, financial, and daily operations. He also oversees the district's technology programs, human resources, school attendance, food services, transportation, and facilities. [12/20/21 N.T. at 5657, 5661 (Przywara)].

618. Ms. Aikens has been an instructional coach at Lancaster’s King Elementary School (“King Elementary”) since 2001. In that role, she organizes professional development programs for staff, manages academic interventions and lesson plans, assists with student services, and coaches teachers. Before becoming an instructional coach at King Elementary, she was a classroom teacher in Lancaster for eleven years. [12/20/21 N.T. at 5978–79, 5985 (Aikens)].

619. Mr. Lopez is Lancaster’s director of student services. [Parties’ Joint Designations of the 5/1/20 Deposition of Christopher Lopez (hereinafter, “Lopez Dep.”) at 7:19-8:3; 10:11-14].

620. Lancaster has 12 elementary schools, four middle schools, one high school, one K-8 school, a cyber academy, and a pre-K program. [Stipulation of Facts ¶ 7].

621. For the current school year (2021-2022), Lancaster has an enrollment of 10,384 students, and 90% of those students are classified as economically disadvantaged. [12/16/21 N.T. at 5046 (Rau); LR-05017A-00005]. Since the 2016-2017 school year, when it enrolled 11,336 students, Lancaster’s enrollment has declined by nearly 1,000 students. [LR-5017A-00005].

622. Twenty percent of Lancaster’s students are not native English speakers. [12/16/21 N.T. at 5046 (Rau)].

623. The number of Lancaster’s English language learner students has been increasing in part because the City of Lancaster welcomes and takes in refugees from around the world. [12/16/21 N.T. at 5056-57 (Rau)].

624. Lancaster serves about 500 refugee students, who came to the district from a variety of countries. [12/16/21 N.T. at 5046 (Rau)].

625. Twenty percent of Lancaster’s students are classified as special education students. [12/16/21 N.T. at 5046 (Rau)].

626. Lancaster serves about 500 homeless students. [12/16/21 N.T. at 5047 (Rau)].

627. King Elementary has approximately 400 students, nearly all of whom live in low-income households. [12/20/21 N.T. at 6000–01 (Aikens)].

628. In its “Comprehensive Annual Financial Report,” dated June 30, 2020, Lancaster stated as follows:

[The School District of Lancaster] offers one of the broadest and deepest academic programs among public schools in Pennsylvania. One of only 13 school districts in the Commonwealth of Pennsylvania, [Lancaster] offers the International Baccalaureate Diploma Program, along with award-winning arts programs, extensive career training and more. ***McCaskey High School sets the standard for excellence in urban education.*** The district also implements the IB Middle Years Program[], an educational framework for classes in grades 6-10 based on the IB Learner Profile.

[12/17/21 N.T. at 5473 (Rau); LR-03199-00016 (emphasis added)].

629. Lancaster is committed to making sure that each of its graduates is ready to pursue a college degree or start a career. [12/17/21 N.T. at 5509 (Rau); LR-02301].

ii. Academic Offerings/Curricula

630. Lancaster invests in its students’ readiness through a comprehensive K-12 college and career readiness curriculum, rigorous courses, and providing opportunities to take college courses at no cost. [12/17/21 N.T. at 5510 (Rau); LR-02301].

631. Lancaster’s high school, McCaskey High School, offers required core courses, including courses in English language arts, math, science, and social studies. [12/16/21

N.T. at 5120 (Rau); LR-00716-00036 to 00063]. ELA, math, science, and social studies offered at McCaskey include:

a. English Language Arts: Communication Arts for Grades 9, 10, 11, and 12; Honors and AP Language and Composition; Honors and AP Literature and Composition; International Baccalaureate (“IB”) English A: Language & Literature SL; IB English A: Literature HL Year 1; and IB English A: Literature HL Year 2.

b. Math: Algebra and Honors Algebra; Geometry and Honors Geometry; Advanced Algebra and Honors Advanced Algebra; Statistics; Algebra III/Trigonometry; Pre-Calculus and Honors Pre-Calculus; Financial Algebra and Honors Financial Algebra; IB Math; AP Calculus; and AP Statistics.

c. Science: Foundations of Science; Biology I, II, and III; Honors Biology I, and AP Biology; Chemistry, Honors Chemistry, and AP Chemistry; Physics and AP Physics; IB Biology; IB Chemistry; IB Environmental Systems & Studies; IB Physics; IB Design Technology; AP Environmental Science; and Anatomy and Physiology.

d. Social Studies: Modern U.S. History, Honors Modern U.S. History; AP U.S. Government and Politics; AP World History; World Cultures; Civics and Government; IB History of the Americas; IB History of Europe; and IB Twentieth Century Topics.

[LR-00716-00036 to 00052].

632. McCaskey High School also offers coursework in art, music, theater, physical education/wellness, and world languages, including the following courses:

a. Art: General art studies; Art history; Clay; Computer photography; Drawing and painting; Illustrator design; Printmaking; Three-dimensional design; Studio art; and IB art and design.

- b. Music: Piano lab; Guitar lab; IB Music; AP Music Theory; Music Technology; Color Guard; Band; Orchestra; Mixed Chorus; Vocal Ensemble; and Chamber Choir.
- c. Theater: Theater I, II, and III; Stage and Design Production I and II; IB Theater; and Movement in Theater.
- d. Physical Education/Wellness: Fitness for Life; Personal Wellness; IB Sports, Exercise, and Health Science; Strength and Conditioning I and II; Football/Basketball; Advanced Baseball/Conditioning; Aerobic Training/Stress Management; Women's Health and Fitness; Advanced Net Games; Women's Strength and Conditioning/Self Advocacy; and Aquatics/Lifetime Sports.
- e. World Languages: French I, II, III, and IV; Honors French I, II, and IV; IB French III, IV, and V; German I, II, III, and IV; Honors German I, and II; IB German III, IV, and V; Spanish I, II, III, and IV; Honors Spanish I, II, and III; AP Spanish V and VI; IB Spanish III, IV, V, and VII; and IB Mandarin V.

[LR-00716-00060 to 00063].

633. McCaskey High School also offers instruction in technology, business, and a variety of other subjects. In fact, the school offers between forty and fifty different elective courses. [12/16/21 N.T. at 5120–21 (Rau); LR-00716].

634. In order for a Lancaster student to graduate from high school, the student must earn four credits in communication arts, four credits in mathematics, three credits in science, three credits in social studies, two credits in world language, two credits in wellness, half of a credit in art or music, and five and a half elective credits. [12/16/21 N.T. at 5240–41 (Rau); LR-00716-00005].

635. For 2018, 56.5% of McCaskey High School students took rigorous courses (which are defined in Section XII.D, *infra*), while, on a statewide basis, an average of 49.2% of high school students took rigorous courses. [LR-01672-00008].

636. For the current school year (2021-2022), McCaskey High School is offering the following courses, among many others: Introduction to Computer Science; Cyber Security; Robotics; Principles of Engineering; Civil Engineering and Architecture; TV Show Production (through which students learn to use the school's closed circuit cable TV system); History of Film; Leadership Seminar; Mock Trial; Street Law (which provides students with a practical understanding of the law and legal system that will be of use to them in their everyday lives); Accounting; Sports and Entertainment Marketing; Business Entrepreneurship; Cosmetology; Computer-assisted Drafting ("CAD"); Journalism; Astronomy; Introduction to Economics; and, Introduction to Sociology. [12/17/21 N.T. at 5299–5303 (Rau); LR-00716-00021 to 00063].

637. Lancaster's middle school offers required core courses, including courses in math, English language arts, science, social studies, physical education/wellness, art, music, theater, and world languages. [LR-00831]

638. For the current school year (2021-2022), Lancaster's middle school is offering the following classes, among various others: Health and Fitness; Art; Practical Daily Living Skills; Practical Science; Practical Math; Career Explorations; Study Skills & Problem Solving; Internet Safety; Spanish; and Spanish Culture & Connections. [12/17/21 N.T. at 5304–08 (Rau); LR-00831].

639. Lancaster's elementary schools offer required core courses, including courses in math, English language arts, science, social studies, physical education/wellness, music, and art. [12/17/21 N.T. at 5308–10 (Rau); LR-00830].

640. Using its ESSER funds, Lancaster plans to spend roughly \$1,225,366 on its curriculum by making two types of investments: (1) investments in standards-aligned curriculum for all grade levels, focusing on four core content areas: English language arts, science, math, and social studies, and (2) investments in professional development programs regarding the effective implementation of the standards-aligned curriculum. [PX-04541-0004].

641. Lancaster offers a number of special academic programs and opportunities for students, including but not limited to the following ones:

- a. Advanced placement courses
- b. Campus Career and Technical Education (“CTE”) Program
- c. Career Exploration Internship Program
- d. Students Occupationally & Academically Ready (“SOAR”) Program
- e. Community Involvement Program
- f. Dual Enrollment Program
- g. Gifted Support Program
- h. Independent Study Program
- i. IB Program
- j. Access to Lancaster County Career & Technology Centers
- k. Lancaster Partnership Program
- l. Work Study Program

[12/16/21 N.T. at 5241–5261 (Rau); LR-00716-00006].

642. Within Pennsylvania, McCaskey High School is one of only a small number of “comprehensive high schools,” which are high schools that provide their own CTE

programming to students. As a comprehensive high school, McCaskey High School offers the following on-campus CTE programs: cosmetology, accounting, building trades and maintenance, computer-aided drafting and design, health careers, early childhood education, and electronics. In tandem with completing some of these programs, such as cosmetology, health careers, and early childhood education, students can apply for state or national certification or licensure in a trade. [12/16/21 N.T. at 5243–44 (Rau); LR-00716-00007 to 00009, 00029].

643. Through its Career Exploration Internship Program, Lancaster offers junior and senior high school students personalized career exploration opportunities at local businesses and nonprofit organizations. As participants in the program, students take an online course that teaches them essential job skills and prompts them to reflect on their career exploration experiences. Through this program, each internship is tailored specifically to address the student-intern’s career goals. [12/16/21 N.T. at 5243-45 (Rau); LR-00716-0009].

644. Lancaster has the SOAR program, through which the students in its CTE program undertake internships that allow them to acquire work experience. [12/17/22 N.T. at 5291 (Rau); LR-00716-00008].

645. Lancaster’s Community Involvement Program is an unpaid co-op arrangement between McCaskey High School and a cooperating agency or business. The co-op experience blends in-school instruction with on-the-job training. As a participant in the program, a student spends part of the school day in classes at school and the other part doing volunteer work in the community. [12/16/21 N.T. at 5248–49 (Rau); LR-00716-00010].

646. Lancaster offers its high school students dual enrollment opportunities, which enable high school juniors and seniors to take college-level courses at several participating colleges and universities in order to earn high school and college credits simultaneously. The

participating colleges and universities include Thaddeus Stevens College of Technology, Eastern Mennonite University, Elizabethtown College, Harrisburg Area Community College, Harrisburg University of Science and Technology, Millersville University, Pennsylvania College of Art & Design, and Pennsylvania College of Health Sciences. [12/16/21 N.T. at 5250–51 (Rau); LR-00716-00010 to 00011]. The number of students who have participated in the dual enrollment program increased from 22 students during the 2015-2016 school year to 270 students during the 2019-2020 school year, and Lancaster expects that those numbers will continue to increase. [12/17/21 N.T. at 5437 (Rau); LR-00873-00020].

647. As part of its dual enrollment program, Lancaster covers the cost of one college course per semester for any student who participates in the program. Lancaster is the only school district in Lancaster County that offers this type of dual enrollment program. [12/16/21 N.T. at 5263–64 (Rau); LR-00716-00010; 12/17/21 N.T. at 5291 (Rau)].

648. Lancaster also offers its high school students other opportunities to obtain college credits. In particular, McCaskey High School students who enroll in the school’s courses in IB Biology, AP Calculus AB, IB Chemistry, AP Computer Science Principles, AP Language and Composition, and IB History of the Americas can, by completing those courses, receive no-cost college credits through Thaddeus Stevens College of Technology or Harrisburg University of Science and Technology. Through this program, Lancaster students can simultaneously earn high school and college credits, for free. [12/17/21 N.T. at 5298–99 (Rau); LR-00716-00011, 00012, 00018].

649. Lancaster’s Gifted Support Program provides high school students who are identified as being gifted with special opportunities for enrichment or acceleration. [12/16/21 N.T. at 5251 (Rau); LR-00716-00011, 00012].

650. Lancaster's Independent Study Program allows McCaskey High School students who have completed all of the school's core academic requirements to pair with a professor to learn more about a particular area of interest. [12/16/21 N.T. at 5252 (Rau); LR-00716-00006, 00012].

651. Lancaster's IB Program is part of an elite global academic platform and, as participants in the program, the district's high school students can receive IB credit and potentially college course credit. For Lancaster's 2020-2021 graduating class, between 25 and 30 students graduated with an IB diploma. Lancaster is one of only six or seven school districts in Pennsylvania that have an IB program. [12/16/21 N.T. at 5252-53 (Rau); 12/17/21 N.T. at 5286–88 (Rau)].

652. Lancaster also offers a separate IB Middle Years Program to students in sixth through tenth grades. [12/17/21 N.T. at 5288–89 (Rau)].

653. Lancaster provides its high school students with access to the Lancaster County Career & Technology Centers. These centers provide students with opportunities to engage in vocational training, including training in the following fields: advanced manufacturing (with course work in metal working and welding); agri-science (with course work in animal production science and technology and veterinary assisting); culinary arts; baking; cabinetmaking and wood technology; heavy equipment operation and basic maintenance; masonry; plumbing; cosmetology; dental assisting; medical assisting; computer system technology; automotive mechanics and technology; photography; and commercial art. [12/16/21 N.T. at 5253 (Rau); LR-00716-00064 to 00068].

654. Through the Lancaster Partnership Program, Lancaster partners with Millersville University to provide high school students and their parents with an opportunity to

learn about college and scholarship opportunities. The program involves workshops on financial aid, college applications, essays, and college preparation, along with mentor meetings and field trips to Millersville University. Students who participate in the program and choose to attend Millersville University are eligible to receive a scholarship to the university, which is renewable for up to five years. [12/16/21 N.T. at 5254–55 (Rau); LR-00716-00013].

655. As a component of its partnership with Lancaster, Thaddeus Stevens College of Technology pays to transport the district’s kindergarten students to its campus and gives them a tour of the campus and classrooms. [12/17/21 N.T. at 5511 (Rau); LR-02301-00003].

656. Lancaster provides its sixth through twelfth grade students with access to “Xello,” which is a new interactive digital platform that allows students to explore colleges and careers and develop an individualized portfolio. [12/17/21 N.T. at 5486 (Rau)].

657. In Lancaster’s middle school, students make connections between their course work and the world of work through the district’s Future Ready Lancaster curriculum, as well as guided career exploration activities through the Xello platform. Additionally, Lancaster’s students in seventh grade visit Thaddeus Stevens College, and its eighth grade students visit the Lancaster County Career and Technology Center. [12/17/21 N.T. at 5486, 5514 (Rau); LR-02301-00005].

658. Through its Work Study Program, Lancaster enables its high school students to earn credits while working. [12/16/21 N.T. at 5260-61 (Rau); LR-00716-00016].

659. Lancaster’s Transition to Work Program is focused on teaching high school students career skills and providing them with guidance on the transition from school to the workforce. [12/17/21 N.T. at 5292–93 (Rau)].

660. In each of Lancaster’s schools, in every grade level, every first Friday of the month is called College and Career First Friday. During these days, the school provides college and career guidance and lessons to students. [12/17/21 N.T. at 5484–85, 5511-12 (Rau); LR-02301-00003].

661. Lancaster has “guaranteed admission” agreements with Thaddaeus Stevens College of Technology and the Pennsylvania College of Art and Design in which Thaddaeus Stevens will admit students automatically, provided that the applicant achieves a certain GPA and SAT score. [12/17/21 N.T. at 5548–50 (Rau); LR-02317].

662. For its fifth grade students, Lancaster hosts a STEM career fair, during which volunteers speak to the students about different STEM professions. [12/17/21 N.T. at 5512–13 (Rau); LR-02301-00003].

663. For its middle school students, Lancaster hosts Virtual College Visits, during which the students can virtually visit with various colleges to learn about opportunities that are available within their fields of interest. [12/17/21 N.T. at 5523 (Rau); LR-02304-00002 to 00004].

664. In 2019, Lancaster retained the Center for Opinion Research at Franklin and Marshall College to conduct surveys of its students and parents. One of the findings of the student survey is that “roughly one-third of students say they don’t feel challenged by their school work, and many do not complete homework.” [12/17/21 N.T. at 5331 (Rau); LR-00870-00002, 00006]. One of the findings of the parent survey is that “only half of parents say their child gets work from their teacher that makes them work hard.” [12/17/21 N.T. at 5332 (Rau); LR-00870-00002, 00013].

iii. Teachers and Staff

665. Lancaster employs approximately 869 teachers, all of whom are certified to teach in Pennsylvania. [12/16/21 N.T. at 5071 (Rau)].

666. As of 2020-2021, Lancaster employed 499 total support staff (including 464 full-time support staff and 35 part-time support staff). [LR-05017A-00008].

667. A paraprofessional is present in each of Lancaster's kindergarten classrooms for at least half of each school day. [12/17/21 N.T. at 5411 (Rau)].

668. In 2018-2019, 100% of Lancaster's teachers were rated as satisfactory. Out of 749 Lancaster teachers who were rated that year, 697 of them were rated as proficient and 52 of them were rated as distinguished. [LR-05017A-00002].

669. Between 2013-2014 and 2018-2019, out of 4,511 teacher ratings for Lancaster's teachers, only 10 teachers were rated as failing. During the same time period, 4,453 of the district's teachers were rated as satisfactory or distinguished. [LR-05017A-00002].

670. In 2020-2021, the average classroom teacher at Lancaster had 12 years of teaching experience and had been teaching at the district for over 11 years. [LR-05017A-00006].

671. As of 2020-2021, the average salary for a Lancaster classroom teacher was \$70,265.70. By comparison, in 2012-2013, the average salary for a Lancaster classroom teacher was \$58,673.25. [LR-05017A-00006].

672. Lancaster offers its teachers a variety of well-funded health insurance plans. For a full-time teacher who is enrolled in the high-deductible health plan, Lancaster deposits into a health savings account (i) no less than \$1,000, if the plan does not cover any of the teacher's dependents, or (ii) no less than \$2,000, if the plan covers the teacher's dependents. [12/20/21 N.T. at 5830 (Przywara); PX-00340-0032 to 0033]. These deposits represent half of the individual and family deductibles under the high-deductible health plan. [PX-00340-0054]. Additionally, the in-

network deductible for the higher-premium “Green Plan” is zero dollars. [12/20/21 N.T. at 5833 (Przywara); PX-00340-0032]. Lancaster also provides its full-time teachers with dental and vision insurance. [12/20/21 N.T. at 5837 (Przywara); PX-00340-0036].

673. Lancaster provides each of its teachers who is regularly on teaching duty for at least ten hours per week, with \$50,000 in life insurance coverage. [PX-00340-0035].

674. Lancaster provides each of its teachers with disability insurance. [PX-00340-0035].

675. Lancaster reimburses its certified teachers for the full cost of obtaining up to twelve post-secondary credits per year, as long as the teacher earns those credits in a degree program that is reasonably related to his or her teaching duties. And, as long as the teacher works for Lancaster for at least two years after obtaining the credits, he or she does not need to pay back the cost of the reimbursement. [12/20/21 N.T. at 5838–39 (Przywara); PX-00340-0037].

676. Lancaster pays teachers up to \$30 per hour, on top of their regular salaries, in order to teach in summer school or evening school. Lancaster also pays teachers \$1,200, on top of their regular salaries, for participating in year-long curriculum writing activities for a given course. [12/20/21 N.T. at 5839–5840 (Przywara); PX-00340-0040, 0041].

677. For its retiring teachers, Lancaster offers a number of benefits. Lancaster pays each of its retiring teachers \$375 per year of service as a “local benefit.” For example, a retiring teacher who taught at Lancaster for twenty-five years receives over \$9,000. Additionally, Lancaster pays each of its retiring teachers up to \$110 for each unused “sick day,” depending on how many of those days the teacher has accumulated. [12/20/21 N.T. at 5841–43 (Przywara); PX-00340 to 0042]. These amounts are separate from the retirement benefits that the teacher receives through the Public School Employees’ Retirement System. [12/20/21 N.T. at 5842 (Przywara)].

678. Lancaster pays its teachers for assisting with extra-curricular athletics activities, with the level of pay keyed to the number of hours that the district designates for the activities and the teachers' level of experience with the activities. For example, the head coach of Lancaster's football team, if he has four or more years of experience with coaching the team, has assistant coaches, and supervises the Level 2 football program, would be credited with 387 hours for coaching the team, plus an additional 20 hours for having assistant coaches, plus an additional 20 hours for supervising the program. The coach would therefore receive compensation for 427 total hours, at a rate of \$20 per hour, which equals \$8,540. [12/20/21 N.T. at 5845-48 (Przywara); PX-00340-0047 to 0050].

679. Lancaster pays its teachers \$19.11 per hour, on top of their regular salaries, for handling intramural activities. Lancaster pays its teachers for assisting with other extracurricular activities as well, including \$5,565 per year to its mock trial adviser and \$6,300 per year for a choreographer. [12/20/21 N.T. at 5849-51 (Przywara); PX-00340-0051 to 0053].

680. Lancaster encourages its teachers to take voluntary professional development courses and compensates them for doing so, at the rate of \$27 per hour (for up to four hours per month) on top of their regular salaries. [12/20/21 N.T. at 5864-66 (Przywara); LR-00700].

681. As of 2020-2021, 557 of 1,031 professionals at Lancaster (over 54%) had obtained a Master's Degree or higher. [LR-05017A-00007].

682. For the current school year (2021-22), the salaries for Lancaster's administrators, including principals, assistant principals, and directors of departments, range from \$71,200 to \$155,000 [12/17/21 N.T. at 5322-25 (Rau); LR-01892-00008 to 00010].

683. For the 2019-2020 school year, Lancaster hired five full-time world language teachers, including one teacher for each of its middle schools. Lancaster hired these teachers as part of its efforts to become IB certified at the middle school level. [12/17/21 N.T. at 5327–29 (Rau)].

684. King Elementary employs high-quality teachers. All teachers at King Elementary receive professional development opportunities. [12/21/21 N.T. at 6064–65 (Aikens)].

685. King Elementary has four English-language learner (“ELL”) teachers, an emotional support teacher, a student and family resource specialist, a counselor, a reading support teacher, a math support teacher, a library and media specialist, an art teacher, and a music teacher. King Elementary also has a student specialist who supervises special education activities at the school and one other school. [12/21/21 N.T. at 6084, 6102–05 (Aikens)].

686. King Elementary has five building aides whose responsibilities at the school include lunch and recess monitoring, office paperwork, running classroom small groups, and meeting one-on-one with students. [12/20/21 N.T. at 6017 (Aikens)].

687. At Lancaster, like in other school districts, each teacher is regularly evaluated, and the largest component of the evaluation is based on observations of the teacher’s day-to-day practices in the classroom, which is the best way of measuring how well the teacher is performing as an educator. [Lopez Dep. 79:1-17].

688. In 2019, Franklin and Marshall College surveyed 1,022 Lancaster employees, including support staff, teachers, LEA staff, and leadership. As the survey results show, only 2% of those employees stated that Lancaster’s biggest challenge was lack of resources and supplies. By contrast, 34% of them said that the biggest challenge is lack of discipline and student behavior and attitude. Similarly, only 4% of the respondents stated that smaller class sizes

and better facilities are the things that would most improve Lancaster as a place to work, while 24% of them stated that consistently enforcing student discipline would improve the workplace. [12/17/21 N.T. at 5437, 5460-64 (Rau); LR-01915-00004, 00025].

689. In 2019, when Lancaster surveyed its staff, teachers, and leadership, 91% of the individuals who responded to the survey stated that the overall quality of education that Lancaster provided was excellent, above average, or average. 8% of the survey respondents stated that the overall quality of education was below average and 2% of them stated that the overall quality of education was failing. [LR-01915-00004].

690. In 2019, when Lancaster surveyed its staff, teachers, and leadership, 74% of the individuals who responded to the survey stated that they believed it was either certain or very likely that they would be working for Lancaster in five years. For the respondents who believed they likely would not be working for Lancaster in five years, 33% of them identified retirement as the reason for this belief. Only 4% of them identified “pay/salary not enough” as the reason why they might leave the district. None of them identified “resources are lacking/inequitable” as the reason why they might leave. [LR-01915-00010, 00011].

iv. Facilities

691. Lancaster has nineteen schools and twenty buildings. [12/16/21 N.T. at 5047 (Rau)].

692. Lancaster has thirteen elementary schools, which house kindergarten through eighth grade. [12/16/21 N.T. at 5077, 5226 (Rau)].

693. Lancaster has four middle schools, which house sixth through eighth grade. [12/16/21 N.T. at 5226 (Rau)].

694. Lancaster has one high school, McCaskey High School, for ninth through twelfth grade. The high school is comprised of two different buildings. [12/16/21 N.T. at 5226 (Rau)].

695. Working with Fidevia Construction Management & Consulting (“Fidevia”), Lancaster is carrying out a twenty-year, four-phase plan to renovate or rebuild every one of its buildings. Lancaster is over ten years into this plan and has renovated or rebuilt fifteen out of its twenty buildings so far. As Lancaster renovates or rebuilds its buildings, it is also outfitting the buildings with new furniture. [12/17/21 N.T. at 5353; 5381–82; 5386 (Rau)].

696. As of December 2021, Lancaster was in Phase 3 of its renovation and construction projects. As part of the Phase 3 work at its Lincoln Middle School, Lancaster has renovated the building, built an addition onto the building, and moved the building’s main office to a new location within the building. [12/17/21 N.T. at 5363–64 (Rau)].

697. In carrying out Phase 3 construction and renovation work at the Reynolds Middle School, Lancaster has gutted the inside of the building, built an auditorium inside the building, and built a new outdoor play deck. The play deck includes a new turf field, with track and field and football lines on it, and a basketball court. The play deck was built atop a new parking lot facility. The play deck project cost the district \$3,311,400. [12/17/21 N.T. at 5364–66, 5368–72 (Rau); LR-00738-00032].

698. The renovations and modernized interior design within the Reynolds Middle School were featured and highlighted in a national trade publication. [12/17/21 N.T. at 5496–97 (Rau)].

699. In performing Phase 3 construction work at its Buchanan Elementary School, Lancaster constructed an entirely new school building, in a new location. [12/17/21 N.T. at 5365–66; 5380 (Rau)].

700. As of December 2021, Lancaster was continuing with “major construction” at its Wickersham Elementary School. When it finishes this renovation project, Lancaster will have spent \$231 million on the overall renovation and re-building efforts. [12/17/21 N.T. at 5386–87 (Rau); 12/20/21 N.T. at 5869 (Przywara)].

701. Lancaster has completed renovations of its Washington, Lafayette, Wharton, Ross, and Fulton Elementary schools. [12/17/21 N.T. at 5387–89 (Rau)].

702. Lancaster is planning to renovate the King Elementary School in the coming years. [12/21/21 N.T. at 6096 (Aikens)].

703. Lancaster has completed a renovation of most of its Hand Middle School. [12/17/21 N.T. at 5387–88 (Rau)].

704. In the summer of 2019, Lancaster completed the construction of a new school building for its E.R. Martin School, which houses kindergarten through eighth grades. [12/17/21 N.T. at 5389 (Rau)].

705. Lancaster’s Phase 4 plan includes a plan to install air-conditioning in the handful of its school buildings that are currently without it. [12/17/21 N.T. at 5390–91 (Rau)].

706. Recently, Lancaster completed renovations at its Rockland Building, which is where it houses, among other things, its cyber program. [12/17/21 N.T. at 5388, 5412-13 (Rau)].

707. In the summer of 2021, Lancaster finished building the new Smith-Wade Elementary School building, a 61,000 square-foot building, at a cost of almost \$21.6 million. [12/17/21 N.T. at 5498 (Rau); LR-03207-00002].

708. With its incoming ESSER funds, and in response to the COVID-19 pandemic, Lancaster plans to upgrade its ventilation systems by purchasing and installing air filter machines. [12/17/21 N.T. at 5503–04 (Rau)].

v. Instrumentalities of Learning

709. Every Lancaster classroom, across all grade levels, is “digital,” meaning that teachers can broadcast content from their iPads onto Apple TVs within the room. To support and assist teachers with using this technology and other types of technology, Lancaster employs two technology coaches. [12/17/21 N.T. at 5344–46 (Rau); 12/21/21 N.T. at 6106 (Aikens)].

710. Prior to the COVID-19 pandemic, Lancaster began to issue iPads to students and teachers on a rolling basis. Each student and teacher in sixth through eighth grades received iPads, and each elementary school classroom received fifteen iPads. Additionally, Lancaster earmarked \$2.5 million for future purchases of iPads, with the aim that each of its students in third through twelfth grade would have one. [12/17/21 N.T. at 5341–42 (Rau)].

711. Using some of its ESSER funds, Lancaster reached its goal of providing iPads to all of its students by August of 2020. [12/17/21 N.T. at 5343 (Rau)].

712. By using ESSER funds to complete its acquisition of iPads, Lancaster was able to roll the \$2.5 million that it had set aside for that purpose into purchasing other technological tools for its classrooms, such as snowball microphones for students who participate, through Zoom, in hybrid classroom situations. [12/17/21 N.T. at 5344 (Rau)].

713. Lancaster offers the Cyber Pathways Education Program, which is a cyber school program for its middle school and high school students that is designed to support students who prefer to take courses in the cyber format, students who need to catch up on credits, and students who want to accelerate their learning. After schools closed due to the COVID-19 pandemic, Lancaster also developed a similar cyber program for its kindergarten through fifth

grade students. In these cyber programs, Pennsylvania-certified teachers serve as academic advisors for the participating students. The district also provides the participating students with a computer or iPad, reimbursement for home internet costs, 24-hour online access to their academic courses, and access to IT support for technical or computer issues. [12/16/21 N.T. at 5094, 5230–31 (Rau); 12/17/2021 N.T. at 5346–48 (Rau)].

714. Lancaster has partnered with the American Reading Company to update its curriculum and acquire new classroom libraries for its elementary schools. Through this partnership, Lancaster has acquired over 23,000 new books for its fourth-grade and fifth-grade classroom libraries. [12/16/21 N.T. at 5110 (Rau); 12/17/21 N.T. at 5340 (Rau)].

715. With the ESSER funds that it has received, Lancaster purchased new math materials for kindergarten through second grade. Lancaster also used the funds to purchase an updated curriculum resource, called the American Reading Company Program, for its third through fifth grades. And Lancaster purchased additional novels for its middle school students to “make [its] resources more diverse.” [12/17/21 N.T. at 5311–12 (Rau)].

716. Lancaster plans to spend roughly \$7 million in ESSER funds to continue with upgrades to its technology resources by, for example, purchasing snowball microphones, cameras, and Apple TVs for every classroom. [12/17/21 N.T. at 5504–05 (Rau)].

717. Lancaster made the choice to purchase (i) Apple TVs for every classroom and (ii) iPads, rather than Chromebooks, for every student. The iPads cost Lancaster about \$250 more per unit than it would have spent had it purchased Chromebooks, like other school districts. [12/20/21 N.T. at 5950-51 (Przywara)].

vi. Finances

718. Based on the most recent AFR data that is available, in the 2019-20 school year, Lancaster spent \$234,653,960 in total and \$22,322.70 per ADM. [PX-01968]. During the

same school year, Lancaster had total revenue of \$235,275,934 and \$22,381.87 per ADM, which ranked it 88th among Pennsylvania’s school districts. [PX-02135].

719. According to its current budget, Lancaster is planning to spend \$250,049,466 in total during the current school year (2021-22). [PX-04535-0012].

720. For the 2021-22 school year, Lancaster initially expected to receive about \$63.7 million in Basic Education Funding from the Commonwealth. However, Lancaster will actually receive nearly \$66 million in BEF, given that the Commonwealth is providing it with \$2.1 million in “Level Up” funding. [12/20/21 N.T. at 5909–10 (Przywara); PX-04535-0006].

721. When forming its budget, Lancaster projects expenditures by starting with its current budget, known as the “status quo” budget, and then considering financial commitments that it has made through collective bargaining agreements, contractual obligations, and debt service obligations. [12/20/21 N.T. at 5667–69 (Przywara)].

722. Lancaster uses conservative calculations to estimate the state, local, and federal revenues that it will receive. In its budget projections, for example, Lancaster projects the amount of Basic Education Funding and special education funding that it will receive from the state based on the previous year’s receipts, without considering any increases, despite the fact that, each year, it has generally received more BEF than the prior year. [12/20/21 N.T. at 5670–72, 5675 (Przywara)].

723. Lancaster’s under-estimation of its revenue can have negative consequences. For example, in its 2020-21 budget, it assumed that there would not be an increase in the amount of Basic Education Funding or special education subsidies that it received from the state. With that assumption in mind, the district projected that it would experience a budget deficit, which led the Lancaster School Board to establish a tax increase of 1.75%, which it expected would

raise more than \$2 million in local revenue. Ultimately, however, Lancaster received an increase of more than \$3 million in Basic Education Funding alone. [12/20/21 N.T. at 5964–66 (Przywara); LR-02316-00003].

724. Overall, Pennsylvania currently provides a higher percentage of Lancaster’s revenue than it provided when the Petition for Review was filed, including revenue in the form of Basic Education Funding, special education funding, and pension payments. [12/20/21 N.T. at 5967–68 (Przywara); LR-05018]. From the 2014-15 school year to the 2019-20 school year, the total revenue that Lancaster received from the Commonwealth increased from \$92,879,786 to \$118,827,551 – an increase of \$25,947,765. [12/20/21 N.T. at 5969 (Przywara); LR-05019].

725. Lancaster’s General Fund is its operating fund, used to finance 98% of its activities. As of June 2020, the total assets – which includes cash, as well as investments, taxes receivable, and amounts due from other governments – in Lancaster’s General Fund totaled \$70,512,132. [12/20/21 N.T. at 5740–41 (Przywara); PX-04530-0008]. Additionally, at the end of the 2019–2020 school year, Lancaster’s governmental fund balances totaled \$30,986,997, including an unassigned fund balance of \$24,140,244. [12/20/21 N.T. at 5880 (Przywara); PX-04530-0011].

726. On June 30, 2020, the total amount of the fund balances for Lancaster’s governmental funds was the highest that it had been since June 30, 2012. [LR-03199-00107].

727. As of the 2019-20 school year, Lancaster had the third largest unassigned fund balance for any LEA in the Commonwealth of Pennsylvania. [PX-01823, “2019-20” tab]. In fact, for every school year from 2012-13 to 2019-20, Lancaster was within the top ten LEAs in the Commonwealth, based on the size of their unassigned fund balances. [PX-01823, “2012-13,” “2013-14,” “2014-15,” “2015-16,” “2016-17,” “2017-18,” “2018-19,” and “2019-20” tabs].

728. Lancaster's unassigned fund balance occasionally grows unexpectedly due to, for example, realized savings and debt reimbursement. [12/20/21 N.T. at 5757–58 (Przywara)]. The unassigned fund balance can be used for any purpose. [12/20/21 N.T. at 5887 (Przywara)].

729. For the 2020–21 school year, Lancaster projected that its ending Unassigned Fund Balance would be about \$16.4 million; however, it ended up being approximately \$18 million. [12/20/21 N.T. at 5897–98 (Przywara); PX-04533]. For the current school year (2021-2022), Lancaster expects to have an ending unassigned fund balance of approximately \$19.1 million. [12/20/21 N.T. at 5914-15 (Przywara); PX-04535-0025].

730. The Commonwealth is Lancaster's largest source of funding. For example, for the 2019–20 school year, Lancaster received \$118,827,551 from state sources, \$92,019,596 from local sources, and \$18,135,616 from federal sources. [12/20/21 N.T. at 5881–82 (Przywara); PX-04530-0014]. Its total revenues were \$228,982,763 and, therefore, more than half of those revenues were from state sources. [PX-04530-0014]. Approximately 51.9% of Lancaster's funding is from the Commonwealth, 40.2% is from local sources, and 7.9% is from federal sources.

731. For the current school year (2021-22), Lancaster is projecting that it will receive \$118,987,648 from state sources. [12/20/21 N.T. at 5909 (Przywara); PX-04535-0004].

732. For the current school year (2021-22), Lancaster is budgeting to spend almost \$17 million more than it did in the prior school year. [12/20/21 N.T. at 5908 (Przywara); PX-04535].

733. In the general fund budget for the current school year (2021-22), Lancaster budgeted to spend \$2,061,402 on sports and other extracurricular activities. It budgeted to spend \$5,412,660 on its pre-K program. [12/20/21 N.T. at 5911 (Przywara); PX-04535-0014, 0016].

734. Despite the fact that, over the past several years, Lancaster’s student enrollment declined by 1,000 students, and despite the district’s expectation that its student enrollment will continue to decline in the coming years, it chose to incorporate \$10 million of additional spending into its 2021-22 budget in order to maintain current staff levels. [12/20/21 N.T. at 5929-31 (Przywara)].

735. Lancaster has a variety of sources of cash on hand. The district projects that, by June 30, 2022, it will have \$2 million in cash and short-term investments in its “other capital projects” fund; \$1.5 million in its food service fund; \$2 million in its internal service (healthcare) fund; and \$20 million worth of long-term investments in its general fund. [12/20/21 N.T. at 5919–22 (Przywara); PX-04535-0017].

736. In total, Lancaster projects that, by June 2022, it will have \$64.9 million in cash and investments on hand, some of which is restricted for specific purposes, like the cash and investments that are housed in the capital projects fund (which must be used solely for capital projects). [12/20/21 N.T. at 5926 (Przywara); PX-04535-0018].

737. Lancaster expects to receive a total of about \$71 million in federal ESSER funding. For purposes of its final general fund budget for the current school year (2021-2022), Lancaster identified about \$21.8 million worth of ESSER funds as anticipated revenues from federal sources. The \$49.2 million difference between these two figures will be reflected on Lancaster’s future final general fund budgets. [12/20/21 N.T. at 5907 (Przywara); PX-04535-0006].

738. Lancaster plans to use some of its ESSER funds not only for facilities purposes and to maintain small class size, but to upgrade its TV studio and invest in standards-

aligned curriculum for core content areas. [12/20/21 N.T. at 5711; 5935–44 (Przywara); LR-03208].

vii. Extracurricular Activities and Athletics

739. Lancaster offers a number of extracurricular activities, including: Heart and Sole; Student Council; Student Government; National Honor Society; National Junior Honor Society; National Elementary Honor Society; Middle School Mural Club; Lighthouse Team; Garden Club; Knitting Club; Chess Club; T-Day Thinkers; Art Club; Elementary Art Club; Chorus; Orchestra; Band; Advantage Lancaster; Yearbook; Extended Day Program; North Museum Science Club; Science Factory Science Club; Tech Club; CODE your WORLD – 4H; Strategic Games; Teambuilding; Cooking Club; Drama/Improv Club; Future Generations Leadership; Math 24; Musical; LEADERS; Quiz Bowl; 24 Math Challenge; Newspaper; Environmental Club; Literary Publication; Safety Patrol; SWAN; Homework Club; Harry Potter Book Club; Compass Mark; Cub Scouts; Boot Camp 900; Creative Thinking; Impact Boys Group; Girl Scouts; Kids in the Kitchen; Tech Girls – YWCA; Wrap Up Lancaster; Adopt a Kindergarten; Science Explorers; All-Pro Dads; English Classes; Migrant Program; CAP’s Nutrition Education Program; Bible to School; Boy Scouts; Good News Club; Lancaster County Parks; Power Up Price-Morning Program; Breakfast Club; Beyond the Bell (tutoring); Wake Up Washington (STEM); Summer Library; Unplug and Play; Monocle; Rock Ford Plantation; Coding Club; Millersville Math Night; Art Smart; After School Board Game Club; Apple Tips (Tech Group); and Third Grade PSSA Group. [Petitioner School District of Lancaster’s Responses and Objections to Senator Scarnati’s Fifth Set of Interrogatories and Requests for Production of Documents at 6-11].

740. Lancaster also offers a number of extracurricular sports and physical activity opportunities, including:

a. High School Level II Sports: Football; Soccer; Field Hockey; Cross Country; Basketball; Wrestling; Swimming; Tennis; Track; Softball; Baseball; Volleyball; Bowling; and Winter Track.

b. High School Level I Sports: Football; Soccer; Field Hockey; Basketball; Wrestling; Track; and Cross Country.

c. Middle Level Sports: Football; Field Hockey; Basketball; and Track.

d. Additional Physical Activities and Intramural Sports: Girls on the Run; Walk and Talk; Basketball Intramurals (Spring); Field Hockey Intramurals (Spring); Fencing Club; Xcel2 Fitness; Lancaster Rec; Beginning Soccer Club; and Sports Club.

[Petitioner School District of Lancaster’s Responses and Objections to Senator Scarnati’s Fifth Set of Interrogatories and Requests for Production of Documents at 6-11; 1/17/22 N.T. at 5426 (Rau); PX-00340-0048 to 0049].

741. For the current school year (2021-22), Lancaster has budgeted to spend \$184,141 on football and \$120,996 on track and field. [12/20/21 N.T. at 5878 (Przywara); LR-03200].

742. In 2019, Lancaster was nationally recognized as a “best community” in musical education for the seventh year in a row. [12/17/21 N.T. at 5427 (Rau); LR-00873-00004].

viii. Class Size

743. As of 2020-21, Lancaster had a student-classroom teacher ratio of 12.8-to-one. [LR-05017A-00009]. This ratio is better than the state average of 14.21 students-per-classroom teacher. [LR-05038A].

744. Lancaster's student-classroom teacher ratio has decreased over the last nine years. In this regard, in 2012-2013, 2013-2014, and 2014-2015, Lancaster had a student-classroom teacher ratio of 14.4-to-one. [LR-05017A-00009].

745. As of 2020-21, Lancaster had a student-total personnel ratio of 6.9-to-one. [LR-05017A-00009]. This ratio is better than the statewide average of 7.14 students-per-personnel. [LR-05038A].

746. Lancaster's student-personnel ratio has decreased over the last nine years. In this regard, in 2012-13, 2013-14, and 2014-15, Lancaster had a student-personnel ratio of between 7.5 and 7.7-to-one. [LR-05017A-00009].

747. A 2019 study commissioned by Lancaster found that 76% of Lancaster students during the 2018-19 school year were in classrooms with 25 or fewer students. [12/17/21 N.T. at 5393–5400 (Rau); LR-00837-00059]. Further, between the 2018-19 and 2020-21 school years, Lancaster's student-to-teacher ratio went from 13.5 to 12.8 students per teacher, as student enrollment declined from 11,080 to 10,384 students. [LR-05017A-00009]. Although Petitioners presented testimony through Dr. Rau and Mr. Przywara related to class sizes, they did not introduce any documents to support that testimony.

748. Lancaster plans to use some of its ESSER funds to maintain small class sizes by, for example, maintaining an average staff-to-student ratio of below one-to-twenty-five in core elementary school classrooms and one-to-twenty in kindergarten classes. [12/20/21 N.T. at 5711; 5935–44 (Przywara); LR-03208]. Additionally, in response to the COVID-19 pandemic, Lancaster used ESSER funds to develop and hire teachers for its Full Circle Learning Program, which is a program for its kindergarten through third grade students. Through this program, Lancaster offers smaller class sizes and social distancing for students who are concerned about

COVID-19. Each of the classes is limited to sixteen students and has a teacher and classroom assistant. [12/17/21 N.T. at 5315–18 (Rau)].

ix. Student Supports

749. Lancaster has roughly 2,000 English language learner (“ELL”) students, many of them refugees, who speak between 50 and 60 different languages. Lancaster has hired between 75 and 85 teachers to meet the specialized needs of these students. [12/16/21 N.T. at 5055–57, 5083-87 (Rau)].

750. Lancaster works with its teachers to help them understand, accommodate, and work with the different types of ELL students who are enrolled in its schools. Lancaster also provides the ELL students’ parents and families with translators for meetings and translated documents. [12/16/21 N.T. at 5084–87 (Rau)].

751. Lancaster employs three “cultural navigators,” who are former refugees. These individuals act as liaisons between the ELL students, their families, and the district’s teachers and administrators. The cultural navigators help the ELL students’ “families feel better about school.” They pick up parents for school meetings, explain to parents what is happening in the schools, and ensure that the ELL students are in the appropriate programming at their schools. [12/16/21 N.T. at 5085–87 (Rau)].

752. Lancaster employs about twenty Student and Family Resource Specialists, who are social workers. The Student and Family Resource Specialists have two primary responsibilities at the district. First, they provide mental health services to students in the district’s schools. Second, they provide support to students’ families outside of school. At least one of these specialists is stationed in each of Lancaster’s school buildings. [12/16/21 N.T. at 5090–91; 12/17/21 N.T. at 5412, 5414-15 (Rau)].

753. Lancaster employs about thirty-four school counselors, who, like social workers, are mental health professionals. The school counselors provide one-on-one counseling services to students and teach classes on college readiness. [12/16/21 N.T. at 5092–94 (Rau); Lopez Dep. at 39:15-40:12].

754. Lancaster employs eleven psychologists. [12/16/21 N.T. at 5095–97 (Rau)].

755. Lancaster operates five or six “community schools,” which are schools that partner with local health and social services agencies in order to offer services to support students’ mental, behavioral, and physical health. In Lancaster’s community schools, students receive in-school access to health, social, and mental health service providers. There are also staff members who track student attendance, visit students’ homes, and create after school and weekend support programs for students and families. Lancaster’s community schools programs are designed to enhance student outcomes in its “neediest schools.” [12/17/21 N.T. at 5404–08 (Rau); Lopez Dep. at 23:8-24:13, Deposition Exhibit 1]. Three of the community schools contain health clinics, as well, through which the district partners with Lancaster General Health to meet the needs of underinsured or uninsured students. [Lopez Dep. at 25:1-26:3].

756. Since 2019, Lancaster has implemented a program called the Positive Behavioral Intervention System of Supports, which aims to acclimate its kindergarten through twelfth grade students to the expectations of being in school. Through this program, the district recognizes and rewards students for good behavior, as a form of positive reinforcement. [12/17/21 N.T. at 5410–11 (Rau); 12/20/21 N.T. at 5995-96 (Aikens)].

757. Lancaster employs between twenty-two and twenty-four instructional coaches, who focus on helping classroom teachers to develop techniques and strategies for tailoring lessons to their students. [12/17/21 N.T. at 5449–50 (Rau)].

758. Lancaster employs four School Resource Officers, who are in essence police officers. [12/17/21 N.T. at 5493–94 (Rau)].

759. For the current school year (2021-22), Lancaster employs fifteen reading specialists. [12/17/21 N.T. at 5404 (Rau)].

760. Lancaster has the Phoenix Academy, which is a stand-alone school that provides accelerated credit recovery opportunities for its ninth through twelfth grade students and provides intensive remedial programming, particularly in mathematics and literacy skill development, for seventh and eighth grade students. [12/16/21 N.T. at 5231–34 (Rau)].

761. Under a contractual arrangement with Lancaster, an entity called Camelot operates and oversees the Phoenix Academy. [12/16/21 N.T. at 5234 (Rau)].

762. Lancaster also offers the Buehrle Academy Program, which provides a small, alternative school setting for students who have serious disciplinary infractions. There are about fifty students in this program. [12/16/21 N.T. at 5234–35 (Rau)].

763. As with the Phoenix Academy, Lancaster uses Camelot to operate its Buehrle Academy Program. [12/16/21 N.T. at 5235 (Rau)].

764. Lancaster's elementary schools offer after-school programming that is focused on reading, writing, and mathematics. [12/16/21 N.T. at 5236 (Rau)].

765. Lancaster's middle schools and high school offer after-school programming, which involves, among other things, providing tutoring to students. [12/16/21 N.T. at 5236 (Rau)].

766. Lancaster's high school and elementary schools offer summer school programs to all of the district's students. [12/16/21 N.T. at 5236–37 (Rau); 12/17/21 N.T. at 5501 (Rau)].

767. Lancaster's Newcomer Program provides support and instruction for the district's ELL students. [12/16/21 N.T. at 5255–56 (Rau); LR-00716-00006].

768. Lancaster's Teen Parent Program supports pregnant students and teen parents to help them complete high school. [12/16/21 N.T. at 5258 (Rau); LR-00716-00006].

769. Lancaster's Lunch Tutoring Program is a lunch-time program through which teachers tutor students that need extra help with particular subjects. [12/16/21 N.T. at 5259–60 (Rau)].

770. Through its Families in Transition Program, Lancaster aims to identify and support students and families who are experiencing homelessness in some form. The district helps families to find adequate housing and employment, when necessary. [Lopez Dep. at 30:6-31:21; 12/17/21 N.T. at 5403 (Rau)].

771. Lancaster's website includes a large variety of useful checklists, tools, and resources to help guide parents and students to be successful in school and beyond, including in the workplace, military, and post-secondary education. [12/17/21 N.T. at 5520–33 (Rau); LR-02021, LR-02303 to 02310].

772. Lancaster employs ten certified school nurses and about twenty health room nurses. The differing nursing titles reflect the differences in the nurses' education and certification levels. [Lopez Dep. at 31:22-32:12; 32:18-33:4].

773. Lancaster provides its economically disadvantaged students with uniforms, transportation, internet hotspots, breakfast, and lunch. [12/16/21 N.T. at 5059–60 (Rau)].

x. Pre-K

774. Lancaster has its own pre-K program, which is available to 4-year-old students in the district, with nineteen pre-K classrooms throughout its school buildings. Currently, there are between 300 and 350 students in Lancaster’s pre-K program. Prior to COVID-19, however, the program regularly enrolled 400 students. [12/16/21 N.T. at 5237–38 (Rau); 12/17/21 N.T. at 5286 (Rau)].

775. Lancaster’s pre-K program is a “high quality” program that is aligned with the performance standards that the Commonwealth has established for programs of that type. Additionally, each of Lancaster’s pre-K classes is taught by a certified teacher and has two paraprofessionals to provide support. [12/16/21 N.T. at 5237–38 (Rau)].

xi. Student Outcomes

776. In the 2018-2019 school year, across all of its schools, Lancaster promoted 99.54 percent or more of its students to the next grade level. [LR-05017A-00004].

777. As shown on the 2019-20 Future Ready PA Index for McCaskey High School, the school’s 4-year and 5-year cohort graduation rates exceeded statewide averages. McCaskey High School’s 4-year cohort graduation rate of 86.77% exceeded the statewide average of 86.5%, and its 5-year cohort rate of 89.32% exceeded the statewide average of 88.9%. [LR-01672-00007, 00008]. These graduation rates are from the 2018-19 school year. [PX-01989, “Grad Rate by School” Tab; PX-01990, “Grad Rate by School” Tab].

778. For the 2019-20 school year, McCaskey High School’s 4-year and 5-year cohort graduation rates were 84.68% and 88.09%, respectively. [PX-01992, “Grad Rates by School” Tab; PX-01993, “Grad Rates by School” Tab].

779. For the 2019-20 school year, with regard to economically-disadvantaged students in particular, 85.59% of McCaskey High School students in the 4-year cohort graduated.

[PX-01992, “Graduate Rate by School” Tab]. Further, 86.19% of the school’s economically-disadvantaged students in the 5-year cohort graduated. [PX-01993, “Grad Rate by School” Tab]. The 4-year and 5-year cohort graduation rates for McCaskey High School’s economically-disadvantaged students exceeded the statewide graduation rates for both 4-year and 5-year cohorts of economically-disadvantaged students. [PX-01992, “Grad Rate by State” Tab; PX-01993, “Grad Rate by State” Tab].

780. Since engaging with the American Reading Company program, which encourages students to read independently, more Lancaster students are now reading on their grade level. [12/17/21 N.T. at 5434 (Rau); LR-00873-00010].

781. As of 2019, Lancaster’s high school students were 6.4% above the state-wide average in industry based learning and 5% above the state-wide average for scoring advanced on NOCTI industry assessments. [12/17/21 N.T. at 5283–84 (Rau); LR-00872-00014].

782. A number of factors that occur outside of the classroom have an impact on the ability of Lancaster students to learn, including homelessness, health issues, food insecurity, chronic absenteeism, and lack of access to proper clothing, among other factors. [Lopez Dep. at 88:2-92:12].

783. Scores on standardized tests do not reflect the hard work that Lancaster puts into its students, and the successes that the district and its students achieve along the way. Success, for example, can include getting students to attend school after they have been chronically absent from school. [Lopez Dep. at 80:7-81:14].

784. In 2019-2020, 48.82 percent of Lancaster students had plans to attend a post-secondary institution. [LR-05017A-00010]. Additionally, 11.3 percent of McCaskey High School students and 12.5 percent of Phoenix Academy students enlisted in the military. And 46.8

percent of McCaskey students and 59.2 percent of Phoenix Academy students entered the workforce. [LR-05017A-00011].

785. From 2017 to 2019, across all grade levels, 53% of Lancaster's economically disadvantaged students met or exceeded the growth standard on the PSSAs. [LR-05022A].

786. From 2017 to 2019, across all grade levels, 66% of Lancaster's ELL students met or exceeded the growth standard on the PSSAs. [LR-05023A].

787. From 2017 to 2019, across all grade levels, 57% of Lancaster's Hispanic students met or exceeded the growth standard on the PSSAs. [LR-05024A].

788. From 2017 to 2019, across all grade levels, 72% of Lancaster's students with IEPs met or exceeded the growth standard on the PSSAs. [LR-05025A].

789. For the 2019-2020 school year, the percentage of McCaskey High School students who scored proficient or advanced on the Algebra I Keystones exceeded the statewide average, 46.7% to 45.2%. [LR-01672-00001].

790. For the 2019-2020 school year, the Future Ready Index shows that, on the "Meeting Annual Academic Growth Expectations" metric, McCaskey High School's ELL students exceeded the statewide average for English language arts (83 to 75), mathematics/algebra (86 to 75.3), and science/biology (94 to 75.1). [LR-01672-00002 to 00003].

791. As compared to standardized test scores, academic growth metrics are a better indicator of how a teacher is performing as an educator. [12/21/21 N.T. at 6074-75 (Aikens); Lopez Dep. at 75:13-77:8].

792. For the 2019-2020 school year, 93.3% of McCaskey High School's students met the career standards benchmark, which exceeded the statewide average of 89.8%. In fact, the

school's black (93.2%), Hispanic (91.7%), economically disadvantaged (92.7%), and English learner (90.2%) students all exceeded the statewide average. [LR-01672-00007].

793. For the 2019-20 school year, McCaskey High School had a 35.5% industry-based learning rate, which exceeded both the statewide average (29.1%) and the statewide performance standard (30.7%). The rate was even higher among Lancaster's Hispanic students (40.3%) and economically disadvantaged students (38.3%). [LR-01672-00008].

794. For the 2019-20 school year, 10.8% of McCaskey High School's students scored advanced on an industry-based competency assessment, which was nearly twice as high as the statewide average of 5.8%. The percentage was even higher for the school's Hispanic students (13.9%) and economically disadvantaged students (12%). [LR-01672-00008].

795. In 2018-19, 77.61% of Lancaster's students attended school regularly. In contrast, over 22% of Lancaster's students missed more than eighteen days of school. [LR-05017A-00013].

796. If students are absent from school, Lancaster cannot teach them. [12/17/21 N.T. at 5420-21 (Rau)].

C. Panther Valley School District

i. Background

797. As of the 2020-2021 school year, Panther Valley has 1,675 students and operates in three buildings. The elementary school houses kindergarten through third grade. The intermediate school, which was built between 2008 and 2009, houses fourth through sixth grades. The junior-senior high school includes grades seven through twelve. Within the junior-senior high school, the seventh and eighth graders are located in their own wing, which was built in 2015. [11/15/21 N.T. at 265–66; 11/16/21 N.T. at 576 (McAndrew); [LR-05029A-00005].

798. Panther Valley is located in Carbon and Schuylkill Counties and includes the Boroughs of Nesquehoning, Lansford, Summit Hill, and Coaldale. [Parties' Joint Designations of the May 29, 2019 Deposition of Dennis Kergick (hereinafter, "Kergick Dep.") at 14:2-10].

799. Panther Valley also offers a cyber-school option for its students through a partnership with the Carbon Lehigh Intermediate Unit. [11/16/21 N.T. at 593 (McAndrew)].

800. Students at Panther Valley face a number of obstacles in their lives outside of school. Likewise, many Panther Valley students "come from families where they have dealt with a lot of trauma in their lives." and "have a lot of issues coming into school." These traumas are a "barrier to education". [Kergick Dep. at 289:11-290:15; 11/17/21 N.T. at 811-12 (Yuricheck)].

801. For the 2019-2020 school year, 56.35% of students attending Panther Valley were classified as economically disadvantaged. [PX-04810]. In addition, 21.02% of students were in the special education program and 1.54% of students were classified as English-language learners. [PX-04810]. Demographically, 79.28% of Panther Valley's students are white, 4.32% are African American/black, and 10.30% are Hispanic. [PX-04810].

802. In a statement posted on Panther Valley's website, Mr. McAndrew, Panther Valley's current superintendent stated, in part:

Panther Valley School District is committed to providing high quality educational opportunities for all of our students. With the work that has already been done with our strategic plan, the ongoing development of a District Facilities Plan, and the fiscally responsible decisions that have been made, there is a strong foundation from which we build upon to accomplish our goals.

As our mission expresses, "Panther Valley School District will prepare students to meet the challenges of today and tomorrow," we will ensure that our students - and graduates - will have knowledge, skills, and experiences needed to achieve their goals and aspirations.

[LR-03083].

ii. Academic Offerings/Curricula

803. Panther Valley provides a well-rounded program of instruction to meet the academic needs of its students. Included within that, the district ensures that students identified as needing educational assistance receive those supports. The district also identifies instructional strategies to improve academic programs and school conditions. [Kergick Dep. at 318:18-24; 319:7-11; 319:16-320:7].

804. Panther Valley aims to offer students an individualized career pathway rather than academic tracks. The district has a college advisor, funded through an anonymous donor, who helps students with their career pathways. [Kergick Dep. at 44:18-25; 45:1-25; 46:1-23].

805. The graduation requirements at the Panther Valley High School are four years of English, four years of math, three years of social studies, three years of science, two years of arts and humanities, two years of physical education, one-and-a-half years of health, one-half year of computer apps I, one-half year of computer apps II, four-and-a-half credits of electives, one-half year of economics and one-half year of personal finance. [Kergick Dep. at 81:21-82:4].

806. Students at Panther Valley High School take classes in subject matters including English language arts, reading, math, science, social studies, art, music and health/physical education. [11/15/21 N.T. at 513-536 (McAndrew)].

807. Panther Valley High School provides core English courses for its students. Most 9th and 10th grade students at Panther Valley take English 9 and English 10, which are offered at both the regular education and honors level. Panther Valley offers an Honors Literature course for 11th grade students and an AP English course for 12th grade students. [11/15/21 N.T. at 518-19 (McAndrew)].

808. The standard path for mathematics for Panther Valley High School students is to take core courses in algebra in 9th grade and 10th grade. After taking algebra, students have an opportunity to take math courses in geometry, trigonometry, and calculus. [11/15/21 N.T. at 526 (McAndrew); LR-00219].

809. Panther Valley's high school offers accelerated instruction through several honors or advanced courses in math, including Honors Algebra, Advanced Geometry, Advanced Trigonometry, and AP Calculus. [11/15/21 N.T. at 526-27 (McAndrew); LR-00219].

810. Panther Valley's high school offers a course in Contemporary Math Applications, that "addresses how the world around us is affected by mathematics. It emphasizes numbers, theory and real world critical thinking applications. This is a broad-based overview of mathematics, which is most suitable for students who are planning to continue their education in fields such as liberal arts, elementary education, social studies, business, nursing and allied health fields." [11/15/21 N.T. at 527 (McAndrew); LR-00219].

811. Panther Valley offers its high school students several other math electives including Keystone Algebra (remediation course), Business Math 1 and 2, Honors Probability and Statistics, and SAT Math Preparation. [11/15/21 N.T. at 528-29 (McAndrew); LR-00219].

812. Panther Valley High School offers science courses in Earth and Space Science, Physical Science, Biology, Forensic Science, Chemistry, Physics, Environmental Science, and Human Anatomy and Physiology. [11/15/21 N.T. at 529 (McAndrew); LR-00219].

813. The typical progression of social studies core courses in Panther Valley for high school students is to take American Cultures in 9th grade, World Cultures in 10th grade, Civics in 11th grade, and Economics in 12th grade. [11/15/21 N.T. at 523 (McAndrew); LR-00219].

814. Panther Valley offers a variety of other high school social studies elective courses including Current Events, Cinema and History, America Goes to War, Honors World History, Introduction to the Criminal Justice System, and Honors Political Science. [11/15/21 N.T. at 525 (McAndrew); LR-00219].

815. Within its high school, Panther Valley offers AP courses in English, Computer Science, U.S. history, and Calculus. The high school also offers honors courses in Algebra, Classic Literature, Calculus, Social Psychology, U.S. History, World History, Political Science, and Probability and Statistics. [11/15/21 N.T. at 513–14, 536 (McAndrew); LR-00219].

816. High school students at Panther Valley have an opportunity to take foreign language instruction in Spanish in-person, and French, German, Latin, or Mandarin through an online provider. [11/15/21 N.T. at 535 (McAndrew); LR-00219].

817. Panther Valley High School offers business-oriented courses including College & Career Readiness, Advertising & Marketing, Introduction to Business I & II, Money Management, Accounting I, II, and III, Personal Finance, International Business, Entrepreneurship, and Investing 101. [11/15/21 N.T. at 536 (McAndrew); LR-00219].

818. Panther Valley's high school offers a technology curriculum including Introduction to Crafts, Introduction to Technology, Material Processes I and II, and CCTI Intro to Electronics. [11/15/21 N.T. at 537 (McAndrew); LR-00219].

819. Panther Valley High School's physical education courses involve classes in basketball, football, golf, kickball, personal fitness, racket sports, softball, volleyball, and weight training. [11/15/21 N.T. at 540 (McAndrew); LR-00219].

820. Multiple art courses are offered at Panther Valley’s high school. These include Foundation to Art, Introduction to Urban Art, Drawing and Painting I & II, Ceramics I, II, and III and Art History. [11/15/21 N.T. at 540-41 (McAndrew); LR-00219].

821. Panther Valley High School offers multiple music courses including Band, American Music, and Introduction to Music Theory and Percussion Ensemble. [11/15/21 N.T. at 541-42 (McAndrew); LR-00219].

822. As Panther Valley’s course guide explains, Computer Applications I introduces students to the terms and skills associated with word processing and spreadsheet software, such that Panther Valley “[s]tudents will learn the basic terminology and skills needed to operate these programs.” As the course guide states that Computer Applications II allows students to learn “more advanced skills” in word processing, presentation, and spreadsheets and “will create multiple business documents that will be useful in their future jobs or schooling after high school.” [11/15/21 N.T. at 513–17, 524, 540 (McAndrew); LR-00219].

823. As the course description for Economics states: “The main objective of this course is to help students understand the basic principles of economics and how they relate to everyday life. This course will place some emphasis on different economic systems, American free enterprise, money, banking, finance, the United States government and our economy, and global economics.” The district requires the economics course because it believes that students must have at least a preliminary understanding about money, banking and finance. [LR-00219; Kergick Dep. at 90:19-91:23].

824. Panther Valley requires students to take a course in personal finance. As the course description states: “This course is required and focuses on the financial skills necessary as a financial independent adult. Students will learn how everyday financial decisions affect their

lives, including budgeting, payroll, and savings and investing, banking, credit and borrowing, insurance and risks and taxes.” The district views this course as giving its students a significant advantage in understanding personal financial matters, for example, loans for college, cars, and a house. [LR-00219; Kergick Dep. at 97:13-98:12;].

825. On the subject of STEM, Panther Valley is preparing to offer numerous courses related to navigating computer programing, programming robots, and building hardware projects. The high school library has been renovated into a STEM lab and media center. The school has installed a 3D printer in the space, which is utilized for teaching multiple courses. [11/15/21 N.T. at 533–35, 365–66, 539–40 (McAndrew)].

826. In utilizing ESSER funds, Panther Valley added 37 new courses to its high school curriculum. These include the following: Apocalyptic and Dystopian Literature; Broadcast Journalism; Monsters and Literature; Children’s Literature; Mythology; Dark Nights; British Literature; American Literature; Writing for the Future; Lehigh Carbon County Community College Research and Writing; Current Events; Cinema and History; America Goes to War; Honors World History; Honors Political Science; Keystone Algebra; Business Math 1; Business Math 2; Honors Prep Probabilities and Statistics; Physical Science 1; Physical Science 2; Advanced Biology; Forensic Science; STEAM (Science Technology, Engineering, Arts, and Mathematics) 1; STEAM 2; Keystone Biology; AP Computer Science; Advertising and Marketing; Introduction to Business; Money Management; Accounting; International Business; Entrepreneurship; Investment 101; Introduction to Business Marketing; Introduction to Crafts; and Introduction to Urban Art. [11/15/21 N.T. at 396–98 (McAndrew); PX-06000].

827. As Panther Valley’s course guide explains, STEAM I offers students an introduction to computer science through “hands-on, collaborative learning experiences. . . [using]

block-based programming, Python text programming, programmable robots such as the Sphero BOLT and the micro: Maqueen Plus, and the Makey electronic invention kit.” STEAM II advances student’s knowledge of programming and computer science through the use of Python, Sphero BOLT, Maqueen Plus, and “Raspberry Pi, a pocket-sized computer designed to teach programming skills and build hardware projects.” [11/15/21 N.T. at 533–35 (McAndrew); LR-00219].

828. In the International Business course offered by Panther Valley’s high school, students “develop the skills to do business in markets around the world. . . [and] learn the ins and outs of multinational organizations’ strategic plans as well as foreign business practices.” [11/15/21 N.T. at 535–36 (McAndrew); LR-00219].

829. Panther Valley offers its high school students a dual enrollment program in conjunction with the Lehigh Carbon County Community College. The college sends an adjunct faculty member to the school district to teach courses, such as sociology and a College Research & Writing course. [Kergick Dep. at 114:20-115:1; 11/15/21 N.T. at 546 (McAndrew); LR-00219].

830. About 70 students at Panther Valley currently attend the Carbon Career & Technical Institute. [Kergick Dep. at 120:16-121:14; 11/15/21 N.T. at 550 (McAndrew)]. The Carbon Career & Technical Institute is a comprehensive high school that provides technical education in addition to core subject areas. [Kergick Dep. at 19:1-4]. Students who attend Carbon Career & Technical Institute spend all day at the school but might return to Panther Valley for sports or extracurricular activities. [Kergick Dep. at 19:18-25]. The number of students attending the Carbon Career & Technical Institute has increased in recent years. [11/15/21 N.T. at 550 (McAndrew); LR-00219].

831. Students attending the Carbon Career & Technical Institute participate in programs including automotive repair and service, carpentry, computer engineering, technology, cosmetology, culinary arts, draft and design technology, electrical distribution and automation, electronics communication engineering technology, graphic design, health or medical assistant occupations, heating ventilation and air conditioning (HVAC), marketing, precision machining technology, and welding. [11/15/21 N.T. at 550-51 (McAndrew); LR-00219].

832. Panther Valley's junior high level covers seventh and eighth grade. In the 2018-19 school year, Panther Valley offered its junior high students courses in language arts, reading, math, history, science (including earth and space science, and life science), art, music, computers, and physical education. Advanced courses in language arts, reading, and math are also offered. Panther Valley also offers its junior high students courses in technology education, career readiness, skills for living, and Lions Quest. [11/16/21 N.T. at 577–82 (McAndrew); LR-00324].

833. Students at Panther Valley Intermediate School take classes in core subject matters including language arts, reading, math, science, social studies, art, music and health/physical education. [11/17/21 N.T. at 879-880 (Yurichcek)].

834. The school also uses the math program i-Ready, which recently replaced some prior math programs. [11/17/21 N.T. at 882, 883-884 (Yurichcek)].

835. Panther Valley Intermediate School students have a six-day cycle of additional classes, in addition to core academic courses. These additional classes cycle between computers, physical education, art, music/Title I math, an arts class, and additional time studying math. The intermediate school also provides a study hall for students to meet with teachers and make up missed assignments. [Mace Dep. at 13:12-14:1; 11/16/21 N.T. at 586-87 (McAndrew)].

836. Panther Valley’s elementary students take courses in art, language arts, learning behaviors, math, music, physical education, reading, respectful behaviors, and science. [11/16/21 N.T. at 590 (McAndrew)].

837. Panther Valley has adopted a new reading program called Fountas & Pinnell in the elementary school based on feedback and recommendations from the teaching staff. With the Fountas & Pinnell program, students read aloud, and do shared reading, guided reading, and independent reading each day. Panther Valley believes that this new reading program allows students to receive direct instruction and comprehension skills and phonics skills, as well as more individualized support in a small group setting. [Kergick Dep. at 47:23-48:24; 148:8-16].

838. In January 2019, the Panther Valley elementary school’s positive behavior support program was evaluated by the PaTTAN group, and received a total score of 98 percent. The evaluation stated, in part: “Panther Valley Elementary School students and staff are well-informed of their schoolwide expectations to be responsible, be respectful and be safe. . . . Congratulations to Panther Valley Elementary School community for investing in creating a positive school culture.” [11/16/21 N.T. at 677-80 (McAndrew). LR-00274].

839. Panther Valley uses an online science program for students in kindergarten through third grade that aims to inspire students to like science by doing experiments. [Kergick Dep. at 393:2-10].

iii. Teachers and Staff

840. All of Panther Valley’s teachers have college degrees, have their teaching certificates, and are certified to teach in Pennsylvania. Many of the district’s teachers and staff also have their master’s degrees. The average teacher has worked in the district for over thirteen years. [11/16/21 N.T. at 598–601, 616 (McAndrew)].

841. As Panther Valley’s superintendent explained, the staff at Panther Valley is “fantastic” and “go[ing] above and beyond to do everything they can for [their] students.” The district’s administrators also “work extremely hard” and the school board members “have the best interest of the students . . . in mind.” [11/15/21 N.T. at 501 (McAndrew)].

842. During the 2019-2020 school year, the average classroom teacher experience for teachers in Panther Valley was 14.5 years. In addition, the average Panther Valley teacher had been teaching in the district for 13.1 years. [LR-05029A-00006].

843. During the 2019-2020 school year, the average teacher salary for Panther Valley teachers was \$52,319.66. [LR-05029A-00006].

844. Teachers at Panther Valley are evaluated using the Danielson model. Panther Valley’s teachers are evaluated twice a year (for those that have not yet achieved tenure) or once a year (for those that have achieved tenure) based on their preparation, understanding of the material, delivery of the material, and professionalism. [11/16/21 N.T. at 602, 604 (McAndrew); LR-05029].

845. Of the teachers evaluated across Panther Valley’s schools during the 2018-2019 school year, fifty-five were rated as distinguished, sixty-one were rated as proficient, and two were rated as “need improvement, satisfactory.” [11/16/21 N.T. at 601–604, 607–09 (McAndrew); LR-00227].

846. During the 2013-14 and 2015-16 to 2018-19 school years, Panther Valley conducted 522 teacher evaluations. During that time, only one teacher was rated as unsatisfactory; the other 521 teacher evaluations rated the teacher as satisfactory. PDE did not report data for Panther Valley’s teacher evaluations in the 2014-15 school year. [LR-05029A-00002].

847. Mr. McAndrew claimed that Panther Valley has high teacher turnover. Mr. McAndrew speculated that Panther Valley's teacher turnover was partially due to Panther Valley's pay scale. Panther Valley has the same pay scale across the elementary school, intermediate school, and junior-senior high school. [11/15/21 N.T. at 616-17 (McAndrew)]. However, as noted above, during the 2019-2020 school year, the average Panther Valley teacher had been teaching in the district for 13.1 years and, according to Ms. Mace, teacher turnover in Panther Valley's intermediate school is limited. [Mace Dep. at 40:25-41:2].

iv. Facilities

848. The district built a new wing onto one of the school buildings to expand the facilities for seventh and eighth grade students. To house the project, the district closed and filled in the school's pool, which was very expensive to operate. [11/17/21 N.T. at 852-853 (Yuricheck)].

849. All of Panther Valley's buildings are heated. The intermediate and high school buildings have air-conditioning. The junior-senior high school recently renovated and improved its cafeteria HVAC system. [11/16/21 N.T. at 624-26, 633 (McAndrew)].

850. Panther Valley has a gym in each of its school buildings. All students, except those in grades kindergarten through fourth, have a science lab available to them. [11/16/21 N.T. at 625, 634-35 (McAndrew)]. Regarding the condition of the junior-senior high school building, witnesses from Panther Valley mentioned that half of the gym could not be used due to a crack in one wall. [11/17/21 N.T. at 850 (Yuricheck)]. However, the accident that caused the crack (a car hitting the gym wall) occurred only a week or two prior to when Mr. McAndrew and Ms. Yuricheck testified at trial. [11/17/21 N.T. at 894 (Yuricheck)].

851. The parking lot at the Panther Valley junior-senior high school was recently repaved. [11/16/21 N.T. at 626-27 (McAndrew)].

852. Panther Valley has renovated athletics fields. The gymnasium in the intermediate school is used for varsity sports. The district also has a baseball field and a softball field. [Kergick Dep. at 202:2-5, 16-22; 203:3-7].

853. The Panther Valley intermediate school is safe. [Mace Dep. at 47:24-25].

854. Panther Valley created and publicly posted a video showing its elementary school. As the video shows, Panther Valley's elementary school is clean and structurally sound. [LR-03006]. The elementary school has bulletin boards and decorations throughout hallways and classrooms. Every classroom shown in the video has a sufficient number of desks with accompanying chairs for student use. As the video also shows, the school contains various carts, bins, shelves, and cabinets containing student supplies. The school has both a gymnasium and cafeteria, which are clean and functional. [LR-03006].

855. Panther Valley created and publicly posted a video of its intermediate school. As the video shows, Panther Valley's intermediate school is clean and in good condition. [LR-03006]. The video depicts a "typical classroom" in the intermediate school. As the video shows, the typical classroom is decorated and has bulletin boards. There are sufficient desks and accompanying chairs. As the video also shows, the hallways in Panther Valley's intermediate school are clean, have student lockers, and are decorated with posters and the school's motto. A sink with soap, hand sanitizer, and paper towel supplies is located in a hallway for student use. There are lab tables in the science classroom depicted in the video. [LR-03009].

856. Panther Valley created and publicly posted a video of its junior-senior high school. As the video shows, the school has a large, clean lobby. The lobby contains a statue of a panther that is surrounded by trophy display cases. As the video shows, there is a school library and a school nurse who is available to students "throughout the day." The video depicts some

seventh grade classrooms, which have sufficient desks and accompanying chairs. As described in the video, the seventh grade classrooms are “large” and “fully decorated.” The junior-senior high school also has a science lab with lab tables. As the video shows, the school has a “newly, almost completed cafeteria.” There is also a large gym with a basketball court. [LR-03010].

v. Instrumentalities of Learning

857. All of the district’s school buildings are fully equipped with desks and chairs for each of its students. [11/16/21 N.T. at 624–26, 633 (McAndrew)].

858. Panther Valley last year provided Chromebooks for each student. [11/17/21 N.T. at 827-828 (Yurichuck)]. The District has also upgraded Wi-Fi in each of its school buildings. [11/16/21 N.T. at 631–32 (McAndrew)].

859. Even before 2020, during which Panther Valley purchased Chromebooks for each of its students in all three schools, every student that progressed through the district and graduated was required to have taken multiple courses using computers. For instance, Panther Valley’s intermediate school had at least twelve Chromebooks in every classroom for students to use. In addition, the intermediate school had three computer laboratory rooms. [11/16/21 N.T. at 629-632 (McAndrew); Mace Dep. at 44:13-45:8].

860. Smart Boards and Promethean boards, which are an updated version of Smart Boards, are available in the majority of Panther Valley’s classrooms. Since the summer of 2020, the District has continued to add Smart Boards to its classrooms. [11/16/21 N.T. at 632–33 (McAndrew)].

861. Teachers in Panther Valley have had a Smartboard in their classrooms for the past six or seven years and have access to Google Classroom to supplement existing textbooks with online lessons and videos. [11/17/21 N.T. at 833-834, 873-874 (Yurichuck)].

862. The district also uses ClassDojo, which is a communication app that facilitates communication between teachers and parents. [11/17/21 N.T. at 890, 891 (Yurichcheck)].

vi. Finances

863. Panther Valley receives funding from the federal government, state government, local earned income and property taxes, businesses, and grants. [11/15/21 N.T. at 291 (McAndrew)].

864. In addition to state and local funding, Panther Valley has received COVID-19 relief funds, *i.e.*, ESSER funds, from the federal government. Panther Valley anticipates receiving about \$8.5 million in ESSER funds. [11/15/21 N.T. at 286 (McAndrew)].

865. Panther Valley used ESSER funding to pay for the following:

- a. Purchased Chromebook laptops for each of its students;
- b. Updated its curriculum by adding new courses for its students;
- c. Purchased a new Phonics program, including textbooks for its English classes from kindergarten through third grade;
- d. Purchased new math textbooks for its kindergarten through sixth grade students;
- e. Purchased a new online mathematics series for its seventh and eighth grade students;
- f. Purchased new Spanish textbooks;
- g. Paid paraprofessional salaries;
- h. Re-initiated its summer school course offerings for sixth through twelfth grade students, which allows students with failing grades to take remedial classes for class credit;
- i. Added numerous Smart Boards in its classrooms;

j. Purchased materials for its STEM program in the intermediate school;

k. Maintained numerous student programs, including in art, music, athletics, and its JROTC program;

l. Purchased additional special education supplies; and,

m. Upgraded its Wi-Fi hot spots throughout its buildings.

[11/15/21 N.T. at 286, 393, 430, 444–45, 544–45; 11/16/21 N.T. at 588–89, 592, 621, 742–44 (McAndrew)].

866. Panther Valley provides free breakfast and lunch to all of its students. [Kergick Dep. at 74:20-24].

867. Panther Valley receives funding designated for providing its students free breakfast and lunch. The district makes money from its food service program and reinvests that money into the cafeteria. For example, the district used those funds to purchase new ovens costing about \$68,000. [Kergick Dep. at 76:11-23].

868. From fiscal year 2014-2015 to fiscal year 2019-2020, Panther Valley's revenue has increased by \$3,898,387.33. [LR-05031-00001].

869. In 2014-2015, Panther Valley's state revenue per ADM was \$6,734.32. In 2019-2020, its state revenue per ADM increased to \$8,109.14. [LR-05030-00001].

870. In 2014-2015, Panther Valley's total revenue per ADM was \$12,996.58. In 2019-2020, its total revenue per ADM increased to \$18,150.11. [LR-05030-00001].

871. In 2014-2015, Panther Valley's expenditures per ADM were \$13,531.86. In 2019-2020, its expenditures per ADM increased to \$18,645.44. [LR-05030-00001].

872. Nonetheless, Panther Valley’s superintendent, David McAndrew believes that, “overall, [Panther Valley]’s circumstances have not changed.” [11/16/21 N.T. at 745 (McAndrew); LR-02191].

873. During the current school year (2021-22), Panther Valley expects to spend about \$198,000 on its JROTC program, \$118,000 on student activities, and \$330,000 on athletics. [11/16/21 N.T. at 700-01 (McAndrew); PX-04603].

874. During the 2019-2020 school year, Panther Valley spent about \$28.5 million. During the 2020-2021 school year, Panther Valley planned to spend about \$28.2 million. [11/16/21 N.T. at 700-01 (McAndrew); PX-04603].

875. During the current school year (2021-22), Panther Valley is planning to spend \$34.4 million, but is also planning to have a budgetary reserve of \$3.4 million. [11/16/21 N.T. at 701-02 (McAndrew); PX-04603].

876. In its 2021-22 budget, Panther Valley is projecting to receive \$9 million in basic education funding as part of its state revenue. [11/16/21 N.T. at 702-03 (McAndrew); PX-04603]. Panther Valley is projecting to receive \$1.3 million in specialized education for school-aged pupil funding as part of its budgeted state revenue. [11/16/21 N.T. at 703 (McAndrew); PX-04603].

877. As PDE data shows, however, for the 2021-2022 school year, Panther Valley will receive an estimated \$9.74 million in basic education funding and an estimated \$1.45 million in special education funding. This amounts to an additional \$900,000 in state funding above the amount projected in Panther Valley’s 2021-2022 budget. [11/16/21 N.T. at 703-04 (McAndrew); LR-04234, LR-04236].

878. In 2019-2020, Panther Valley had a capital projects fund as well as a general fund. The capital projects fund contained \$1.1 million. On Panther Valley's most recent AFR, for 2019-2020, there was a restricted fund balance in the capital projects fund of \$1.1 million and a total governmental fund balance of \$2.3 million. [11/16/21 N.T. at 713-15 (McAndrew); PX-04605].

879. The final general fund budget is a projection made the year before and does not actually reflect the actual funding of the district for the year that it denotes. Circumstances may change throughout the school year, resulting in changes to how the funds are ultimately spent. [11/16/21 N.T. at 748-49 (McAndrew); PX-00828].

880. Mr. McAndrew testified about PD-01-0001, a demonstrative exhibit that purports to show decreases in Panther Valley's fund balance.⁸ However, the exhibit only shows information related to Panther Valley's general fund balance, and does not include other funds maintained by Panther Valley, such as its capital projects fund. While Panther Valley's total governmental fund balance in 2019-20 was \$2.3 million, PD-01-0001 only depicts a fund balance of \$1.22 million for that year. [11/16/21 N.T. at 699-716 (McAndrew); PX-04605-010 to -011; PD 01-01]

881. PD-01-0001 excludes Panther Valley's current budgetary reserve of at least \$3.48M for the 2021-22 school year. [11/16/21 N.T. at 705-06 (McAndrew); PD-01-0001].

882. While the fund balances for 2010-11 through 2019-2020 shown on PD-01-0001 are based on PDE data taken from annual financial reports, the data on PD 01-0001 from 2020-21 and 2021-22 is taken from Panther Valley's budget documents. As Mr. McAndrew

⁸ In the transcript, this document is also referred to as LR-2272. [11/16/21 N.T. at 707 (McAndrew)].

acknowledged, Panther Valley's budgets for the 2020-21 and 2021-22 school years underestimate the district's state funding. [11/16/21 N.T. at 703-05, 707-11 (McAndrew); PX-04603-020].

883. Accordingly, for the reasons stated above, PD-01-0001, and Mr. McAndrew's testimony regarding this document, are not an accurate depiction of Panther Valley's total fund balance over the years depicted on the exhibit.

vii. Extracurricular Activities and Athletics

884. Panther Valley students can participate in a variety of sports and athletic activities, including football, volleyball, basketball, baseball, softball, track and field, cheerleading, swimming, golf, and soccer. The district has a grass football field and a baseball and softball field. [11/16/21 N.T. at 693-95 (McAndrew)].

885. Other extracurricular activities offered by the district include the Drama Club, Student Leadership, School Newspaper, Good News club, Yearbook Club, and the Future Business Leaders of America. [11/16/21 N.T. at 693-95 (McAndrew)].

886. Panther Valley offers a number of extracurricular music programs like marching band, concert/performance band, and chorus. [Kergick Dep. at 449:12-450:4].

887. For the past thirty years, Panther Valley has offered an Army Junior ROTC program in which about 100 total high school students – nearly 25 percent of the study body – participates. Any student who is interested is able to participate. A retired major and a retired first sergeant from the U.S. Army teach the course. The program emphasizes leadership and citizenship topics as well as an array of military protocol, procedures, history, and physical fitness topics. [11/15/21 N.T. at 542-44 (McAndrew); Kergick Dep. at 100:16-101:25; 102:11-21; 103:2-6].

888. The Panther Valley Intermediate School has a library that is overseen by the Title I reading teacher. The school also has a student leadership group of 6th grade students who help shelve books. [Mace Dep. at 60:25-61:12].

889. Fourth and Fifth Grade students at Panther Valley Intermediate School can participate in the SHINE after-school program. [Mace Dep. at 60:4-15]. The SHINE program provides STEM projects, works with students to make sure their homework is done, works on positive behavior skills, and feeds the participating students dinner. [11/17/21 N.T. at 855, 875 (Yuricheck)].

890. Panther Valley offers a work cooperative, which allows students who have completed the requisite coursework the freedom to leave early on a school day to work. [Kergick Dep. at 104:13-105:6].

891. Panther Valley has a mentorship program in which incoming freshman are assigned a staff member who serves as a mentor. [Kergick Dep. at 105:10-12].

892. Students at Panther Valley can apply to be inducted into the National Honor Society. The district has a National Honor Society that is run by two faculty advisors, and has a committee of five faculty members to screen applicants. Panther Valley students are accepted into the National Honor Society every year. [Kergick Dep. at 132:7-133:12].

893. Panther Valley offers a Skills for Success course that teaches students study skills and test preparation. [Kergick Dep. at 141:9-19].

894. Students at Panther Valley have access to Moby Max, an online math enrichment tool to help students struggling in math. [Kergick Dep. at 146:4-8].

895. Students at Panther Valley have access to My Access, which provides reading or language arts enrichment. [Kergick Dep. at 146:14-23].

896. Panther Valley has a partnership with the American Reading Company to provide students with independent reading materials. [Kergick Dep. at 149:11-150:7].

897. The Panther Valley Intermediate School has a student garden funded through a grant from St. Luke's. [Mace Dep. at 59:7-10].

viii. Class Size

898. In 2019, kindergarten classes at Panther Valley had about 22 students. Although Mr. McAndrew claimed that kindergarten classes are larger during the current school year (between 26 to 28 students), he also acknowledged that the incoming class was the largest in over ten years. Mr. McAndrew has never counted the number of students in a class and, as he acknowledged, class enrollment data is maintained by Panther Valley. As Mr. McAndrew recognized, the class enrollment data maintained by Panther Valley is more accurate than his own memory. Petitioners did not introduce class enrollment data for Panther Valley. [11/16/21 N.T. at 621-22, 738-39 (McAndrew); Kergick Dep. 50:9-10].

899. Elementary grades 1 to 3 have about 23 or 24 students per class. The intermediate school and the junior high school have about 25 students per class. High school classes range in size from 12 to 30 students, depending on the class. For instance, advanced placement classes are smaller. [Kergick Dep. at 50:21-51:7; 51:23-52:5, 9-12].

900. Fifth grade class sizes currently range from 25 to 34 students, but they are larger this year than in the past. This year is the largest they have been in a while due to the recent loss of a fifth grade teacher within the district. [11/17/21 N.T. at 818 (Yurichack)]. In 2020, there were about 25 students per class; in 2019, there were about 20 students per class. [11/17/21 N.T. at 871 (Yurichack)]. At the fifth grade level, the largest class has 34 students. However, the class that has 34 students in it is a special education inclusion course that is taught by two teachers. [11/17/21 N.T. at 894 (Yurichack)].

901. One of the reasons class sizes are higher this year is because a number of students were retained and held back due to the remote learning caused by COVID shut downs.

[11/17/21 N.T. at 872 (Yuricheck)]. The school has also been impacted by the death of two teachers in October (positions that the district is actively looking to fill). [11/17/21 N.T. at 8872 (Yuricheck)].

902. During the 2019-2020 school year, the student-to-classroom teacher ratio was 15.4 students per classroom teacher. [LR-05029A-00009].

903. During the 2019-2020 school year, the student-to-staff ratio was 8.8 students per reported personnel. [LR-05029A-00009].

ix. Student Supports

904. During the 2019-2020 school year, Panther Valley reported employing 184 professional and support personnel, including 120 professional personnel (including administrators, classroom teachers, and others), 51 full-time support staff, and 13 part-time support staff. [LR-05029A-00008].

905. Panther Valley employs the following administrators: a superintendent, a business manager, three principals (one for each school building), a technology director, a supervisor of building and grounds, an athletic director, and a special education director. [11/15/21 N.T. 377–78 (McAndrew); Kergick Dep. at 213:1-14].

906. With regard to other teaching staff, Panther Valley offers the support services of three reading specialists - through Title I - in its elementary and intermediate schools. [11/15/21 N.T. at 335–36 (McAndrew); Kergick Dep. at 165:9-20].

907. Panther Valley offers the support services of nineteen paraprofessionals. Paraprofessionals offer a wide array of services, including life skill support for intellectually disabled students, small group academic instruction, and extra support in the classroom with teachers and substitutes. [11/15/21 N.T. 341–43 (McAndrew)]. Panther Valley’s intermediate

school has seven paraprofessionals that assist in the classroom and a reading specialist. [11/17/21 N.T. at 841-842 (Yurichack)].

908. Panther Valley employs four guidance counselors, including one in the elementary school, one in the intermediate school, and two in the high school. [11/15/21 N.T. at 349 (McAndrew)].

909. Panther Valley employs one psychologist and has the funding to hire, and has been looking to hire, a second. [11/15/21 N.T. at 358 (McAndrew)].

910. Panther Valley also employs an armed security guard, two certified school nurses, and a third nurse that is working to become certified. [11/16/21 N.T. at 619 (McAndrew)].

911. Through a grant organized with a local hospital, St. Luke's, Panther Valley offers weekly support services of a social worker. [11/15/21 N.T. at 272 (McAndrew)].

912. With the help of additional funds from St. Luke's and a local business, Panther Valley is now offering the support of a family development specialist for the 2021-2022 school year. This new role, which is in place at the elementary school, was created to bolster the social and communication skills of the younger students transitioning from online schooling during COVID to in-person, live classroom learning. [11/15/21 N.T. 352; 11/16/21 N.T. at 620 (McAndrew)].

913. Through the assistance of outside providers, Panther Valley also provides free dental screenings for its students. [11/16/21 N.T. at 697-98 (McAndrew)].

914. Students in Panther Valley may participate in or be served by St. Luke's University Health Network for medical services or other minor services. [Petitioner Panther Valley' Response to Interrogatory No. 1, 12/16/2019].

915. Panther Valley also provides students with a mental health after school weekly clinic and CLIU groups for trauma therapy (CBITS). [Petitioner Panther Valley’ Response to Interrogatory No. 1, 12/16/2019].

916. Panther Valley has a Student Assistance Program (“SAP”), which works with at-risk students. [11/17/21 N.T. at 821 (Yuricheck)]. SAP is a state-mandated program and its teacher team meets weekly. [11/17/21 N.T. at 875-876 (Yuricheck)].

917. Panther Valley employs 26 special education teachers who teach 360 of the 400 students in the special education program. The remaining 40 students are placed outside of the district. [Kergick Dep. at 170:20-171:5].

918. Panther Valley provides English-learner services to about 24 students. [Kergick Dep. at 174:9-22].

919. The Panther Valley Intermediate School has about 40 teachers, including special education teachers. The school has a life skills special education teacher, an emotional support special education teacher, and a learning support special education teacher. The school also has four related arts teachers (e.g., art, music, gym, and computer), a Title I math teacher, and a Title I reading teacher. [Mace Dep. at 12:12-13:7].

920. Students at Panther Valley who failed a given minimum number of courses can attend summer school to make up the credits. The summer school runs from 6th grade to 12th grade and covers the core courses. Students can also take courses online if they are not able to take necessary courses that they failed during the school year. [Kergick Dep. at 105:16-106:2].

x. Pre-K

921. Students in Panther Valley have the ability to participate in a Pre-K Counts program. The program is housed in Panther Valley’s Elementary School, but is staffed by the

Lehigh Valley Learning Center. The program is paid for through the Pre-K Counts program, not by Panther Valley. [11/16/21 N.T. at 592-93 (McAndrew)].

922. Children in Panther Valley also have access to a Head Start program run in Coaldale, Pennsylvania. In addition, early intervention services are available from the Carbon Lehigh Intermediate Unit. [Kergick Dep. at 42:4-9; 44:2-10].

xi. Student Outcomes

923. A passing grade at Panther Valley indicates that the teacher has evaluated the student's knowledge of the material and determined that the student learned the subject of the course. [Kergick Dep. at 270:24-271:16].

924. Likewise, Panther Valley's Intermediate School principal, Lisa Mace, stated that student grades reflect whether students met the goals and objectives set by their teachers. [Mace Dep. at 28:16-21].

925. During Quarter 4 of the 2018-19 school year, Panther Valley's high school students received an A, B, or C 84.3% of the time. [LR-05091].

926. The distribution of Quarter 4 grades among Panther Valley's high school students in the 2017-18 and 2016-17 school years for high school students was similar to the distribution of grades in the 2018-19 school year. [LR-05091].

927. In 2018-19, Panther Valley's intermediate school students were graded on a traditional letter grade scale (A, B, C, D, and F) and on a proficiency grade scale (advanced, proficient, basic, and below basic). During Quarter 4 of the 2018-19 school year, based on the traditional letter grade scale, Panther Valley's intermediate school students received an A, B, or C 86.8% of the time. [LR-05091].

928. During Quarter 4 of the 2018-2019 School Year, based on the proficiency grade scale, Panther Valley's intermediate school students were graded as advanced or proficient 98.3% of the time. [LR-05091].

929. The distribution of Quarter 4 grades among Panther Valley's intermediate school students in the 2017-18 school year was generally consistent with the distribution of grades in the 2018-19 school year, for grades under both the traditional scale and the proficiency scale. [LR-05091]. Likewise, the distribution of Quarter 4 grades among Panther Valley's intermediate school students in the 2016-17 school year was generally consistent with the distribution of grades in the 2018-19 school year for grades under the traditional scale. However, for 2016-17, grades were not reported on a proficiency scale. [LR-05091].

930. Panther Valley tracks academic growth in a number of ways, including, but not limited to: formative and summative assessments, grades, standardized testing, and benchmark assessment tools. Not all tests are used at all times, but these assessments include, but are not limited to, PVAAS data, PSSAs, Keystones, and local benchmark assessments such as star reading and star math, Fountas and Pinnell benchmark assessments, Scholastic Reading Assessment, Newsela, and Classroom Diagnostic Tests. [Petitioner Panther Valley' Response to Interrogatory No. 2, 12/16/2019].

931. Panther Valley uses information regarding academic growth in numerous ways, including, but not limited to, school district awards, in-class instruction and support, evaluations for the child find process for special education, class placement decisions, and gifted determinations. [Petitioner Panther Valley' Response to Interrogatory No. 3, 12/16/2019].

932. Panther Valley believes that PVAAS is the best way to measure student growth. [Kergick Dep. at 409: 7-15].

933. During the 2018-2019 school year, Panther Valley met the PVAAS growth standard for the math and ELA PSSA assessments. [LR-05029A-00001].

934. During the 2017-2018 school year, Panther Valley met the PVAAS growth standard for the ELA PSSA assessment, and it exceeded the growth standard for the Literature Keystone assessment. [LR-05029A-00001].

935. During the 2016-2017 school year, Panther Valley met the growth standard for the ELA PSSA assessment, and it exceeded the growth standard for the Literature Keystone assessment. [LR-05029A-00001].

936. During the 2015-2016 school year, Panther Valley met the growth standard for the ELA PSSA assessment and exceeded the growth standard for the math PSSA and Literature Keystone assessments. [LR-05029A-00001].

937. During the 2014-2015 school year, Panther Valley exceeded the growth standard for the Literature Keystone assessment. [LR-05029A-00001].

938. During the 2013-2014 school year, Panther Valley exceeded the growth standard for the Literature Keystone assessment. [LR-05029A-00001].

939. Between 2016-17 and 2018-19, Panther Valley's PVAAS scores for the PSSA exam showed that the district met or exceeded the growth standard for 21 out of 31 (67.7%) of student levels (which includes both single-grade and across grade levels) reported by PDE during that time frame. [LR-05034A-00001].

940. With regard to Panther Valley's special education students, during the 2017-18 and 2018-19 school years, the district met or exceeded the growth standard in 58% of single grade levels, and 75% of across grade levels, reported by PDE. [LR-05036A].

941. With regard to Panther Valley's economically disadvantaged students, during the 2017-18 and 2018-19 school years, Panther Valley met or exceeded the growth standard in 60% of single grade levels, and in 75% of across grade levels, reported by PDE. [LR-05035A].

942. The number of students at Panther Valley who score at benchmark levels on the DIBELS test increases each year as a result of the education provided by the district. [Kergick Dep. at 238:13-22].

943. Panther Valley has made progress in closing the achievement gap. [Kergick Dep. at 248:3-5].

944. Panther Valley's intermediate school is exceeding statewide growth standards for math and is meeting statewide growth standards for science/biology. [Mace Dep. at 26:3-8].

945. Students at Panther Valley cannot graduate without having sufficient passing credits, although, for special education students, there could be different requirements because of an IEP. [Kergick Dep. at 262:17-263:25].

946. In 2019-2020, 81.52% of students in Panther Valley's four-year cohort graduated, 85.09% of students in the five-year cohort graduated, and 86.92% of students in the six-year cohort graduated. [LR-05029A-00003].

947. During the 2018-2019 school year, Panther Valley's 5-year cohort graduation rate for economically disadvantaged students was 92.86%, compared to the state average of 84.15%. [LR-05032-00001].

948. During the 2018-2019 school year, 99.80% of elementary students and 99.78% of intermediate students were promoted to the next grade level at Panther Valley. [LR-05029A-00004].

949. Every year, Panther Valley submits a document to PDE that outlines the number of graduates that are moving on to college, military positions, or employment. For the 2019-2020 school year, 47 out of 80 (58.8%) Panther Valley graduates reported that they planned to attend college or postsecondary school, five planned to join the military, ten planned to join the workforce, and eighteen did not report anything. During the 2018-19 school year, 67 out of 96 (69.8%) Panther Valley graduates planned to attend college or postsecondary school, nine planned to join the military, eleven planned to join the workforce, and nine were unaccounted for. [11/16/21 N.T. at 684–91 (McAndrew); LR-01291, LR-00220].

950. Panther Valley students often get scholarships to college because of their participation in Panther Valley’s JROTC program. [11/16/21 N.T. at 438 (McAndrew)].

951. In 2018-2019, 88.21% of Panther Valley students met the career standards benchmark. In 2017-2018, 97.24% of Panther Valley students met the career standards benchmark. [LR-05029A-00012].

D. Shenandoah Valley School District

i. Background

952. Brian Waite is the Superintendent of Shenandoah Valley School District (“Shenandoah Valley”). He has held that position since May 2, 2016. [12/8/21 N.T. at 3366–67 (Waite)].

953. In the 2020-21 school year, Shenandoah Valley had 1,001 students. Since 2017, overall enrollment in Shenandoah Valley has declined by 108 students. [LR-05050A-00005].

954. Approximately 75.44% of students enrolled at Shenandoah Valley come from low-income families. [12/8/21 N.T. at 3381 (Waite); PX-04886].

955. Out-of-school factors including socioeconomic status, home environment, and parental involvement influence Shenandoah Valley students' educational experiences. [12/9/21 N.T. at 3807–08 (Waite)].

956. Shenandoah Valley has high populations of English Language Learners and students with special needs. [12/8/21 N.T. at 3372–73 (Waite)].

957. In the 2018-19 school year, only 78.46% of Shenandoah Valley students had regular attendance. [LR-05050A-00013]. The district's high rate of absenteeism can skew the results of standardized tests. [12/9/21 N.T. at 3577–80 (Waite)].

958. In the 2019–20 school year, Shenandoah Valley's student body was 43.84% White, 51.16% Hispanic, 3.8% Black, and 0.46% Asian. [PX-04812].

959. Shenandoah Valley has not considered combining or merging with another school district. [12/9/21 N.T. at 3791 (Waite)].

ii. Academic Offerings/Curricula

960. Shenandoah Valley Elementary School offers students core courses in English language arts, reading, math, science, social studies, physical education, and health. Students in 5th and 6th grade may also participate in band. Teachers also incorporate art projects into their classrooms. Additionally, Shenandoah Valley has increased STEM opportunities in its elementary school. [12/9/21 N.T. at 3648-50 (Waite)].

961. Shenandoah Valley Elementary School has a library where teachers can bring their students. [12/9/21 N.T. at 3649 (Waite)].

962. Shenandoah Valley Junior High School offers students core courses in English language arts, math, science, social studies, physical education, art, music, and computers. Core courses for 7th-grade students include: Science Applications, Geography, Math or Pre-Algebra, Futures I, English Language Arts, Physical Education/Health, Music, Art, and

Introduction to Computers. [12/9/21 N.T. at 3643 (Waite); LR-01787-00007]. Core courses for 8th-grade students include: English Language Arts, Algebra 1/2 or Honors Algebra I, Science 8, Civics and Pennsylvania History, Music 8, Art 8, Keyboarding, Futures II, and Physical Education/Health. [12/9/21 N.T. at 3645 (Waite); LR-01787-00007].

963. Shenandoah Valley High School has three academic tracks for its students: (1) the college preparation track for students who want to pursue post-secondary education; (2) the applied/business track, which “provides students with the core competencies that they will need to excel in the workplace of the 21st Century;” and (3) the vocational/technical track for students to learn trades. Vocational/technical track students take courses at the Schuylkill Technology Center. [12/9/21 N.T. at 3597–3600 (Waite); LR-01787-00006].

964. To graduate from Shenandoah Valley High School, students are required to take four credits of English, math, and science; three credits of social studies, one credit of physical education, half a credit of health, two credits of arts and humanities, and four credits in electives. Students must also complete a community service project. [12/9/21 N.T. at 3596 (Waite)].

965. Additionally, in order to graduate, Shenandoah Valley students must perform community service. The community service program requires students to complete at least 32 hours of community service during their high school career, and its goal is to “involve our students in their community,” so that students “learn that a well-rounded education needs to extend beyond the school building.” [12/9/21 N.T. at 3627–28 (Waite); LR-01787-00045]. The community service requirement is “instrumental in achieving the citizenship goals of standards-based education.” [12/9/21 N.T. at 3630 (Waite); LR-01787-00046].

966. Shenandoah Valley also requires students to complete a graduation project. The purpose of the project, “which may include research, writing, or some other appropriate form

of demonstration, is to assure that the student is able to apply, analyze, synthesize and evaluate information and communicate significant knowledge and understanding. Projects may be undertaken by individual students or groups of no more than three students.” [12/9/21 N.T. at 3632–33 (Waite); LR-01787-00052].

967. Shenandoah Valley High School offers students core courses in English language arts, math, science, social studies, physical education, health, arts, and humanities. Examples of core courses offered to high school students include:

a. English language Arts: English 9, English 10, English 11, and English 12.

b. Math: Algebra I, IA, IB, II; Honors Algebra II; Geometry; Trigonometry; Honors Trigonometry or Calculus; AP Calculus; and Economics.

c. Science: General Science; Biology I; Chemistry; Environmental Science; Physics; Earth Science; Space Science; and Physical Science.

d. Social Studies: American History I; World Cultures; and American History II.

[12/9/21 N.T. at 3600–13 (Waite); LR-01787-00015 to 00026].

968. The high school offers a number of additional courses to students, examples of which include: Spanish, Latin, Business, Accounting, Personal Finance, Computer Applications, Information Technology, Digital Photography/Videography, Graphic Design, Independent Piano Lab, Music Theory, and AP Music Theory. [12/9/21 N.T. at 3613–14 (Waite); LR-01787-00026 to 00031].

969. Shenandoah Valley has aligned its curriculum to the Pennsylvania common core standards for ELA and mathematics. [12/9/21 N.T. at 3672 (Waite)].

970. Every student who attends Shenandoah Valley Junior High gains basic knowledge of computerized keyboarding and word processing. [12/9/21 N.T. at 3647 (Waite); LR-01787-00028].

971. In the Introduction to Computers course, for example, 7th-grade students learn “how computers work, history of computers, keyboarding, and the Internet. The course also discusses Internet safety, cyber bullying, and identity theft. Students will use word processing software to create all their notes and study guides.” [12/9/21 N.T. at 3645 (Waite); LR-01787-00027].

972. Shenandoah Valley’s core courses expose students to a wide range of content. For example, the 9th-grade English class covers Shakespeare, short stories and epic poetry. [12/9/21 N.T. at 3605 (Waite)].

973. Additionally, the core American Literature course offered to 10th-grade students covers the following:

This course will allow students to study the birth of our nation through various genres. The students will study pilgrims coming to America, experience the American Revolution, enjoy the Reconstructive period, gain insight into the philosophies of the Transcendental Era, agonize with the conflicts of the Civil War and move into modern day philosophies and writers. Students will be expected to read and comprehend stories, essays, poems, et cetera. This course will allow students to identify specific formats and creatively produce their own works.

[12/9/21 N.T. at 3605–06 (Waite); LR-01787-00020].

974. Students also take core courses in British Literature in 11th grade and World Literature in 12th grade. [12/9/21 N.T. at 3605–06 (Waite); LR-01787-00019].

975. Shenandoah Valley students in 11th grade must also take a mandatory writing-intensive class, which, as the course guidelines describe:

[F]ocuses on developing and strengthening students' writing skills through the preparation and execution of multiple literary analysis essays, as well as a research paper. The course is designed to stress the importance of student's improvement in writing over the whole of the course. Development of organizational skills and documentation of sources using MLA format and APA format as appropriate are also course expectations.

[12/9/21 N.T. at 3607-08 (Waite); LR-01787-00020].

976. Shenandoah Valley offers high school students a variety of ways to obtain required science credits, including Physical Science, Applied Chemistry, Earth Science, Environmental Science 1 and 2, and Space Science. In Space Science, “students will study the nature of science, the universe and the solar system, the development cycle of stars, the earth-moon system and space exploration.” [12/9/21 N.T. at 3608–09 (Waite); LR-01787-00021 to 00024]

977. Shenandoah Valley offers a STEM course to fulfill science requirements, in which students “develop and expand skills relating to idea development, research, creating and testing models, evaluating designs, collaboration, and communication.” [12/9/21 N.T. at 3610; (Waite); LR-01787-00023].

978. Shenandoah Valley offers an American Government class, in which students study local, state, and federal government, including the structure of government, political parties, campaigns and elections, and citizenship and participation. [12/9/21 N.T. at 3605–06 (Waite); LR-01787-00025].

979. Shenandoah Valley requires all 12th-grade students to take an economics course, which covers “the basic economic problems of scarcity and choices, economic systems, markets, supply and demand, the roles of business, labor and government in the economic system, money and banking, measurement of economic performance, monetary and fiscal policy, and the

world economy. An important focus of the course will be related economic concepts to relevant life situations.” [12/9/21 N.T. at 3612; (Waite); LR-01787-00025].

980. As shown by a survey of parents included in the 2019-20 school-wide plan for the Shenandoah Valley elementary school, “[p]arents are satisfied with the Title 1 reading and math service” in the school. The parents stated: “Very pleased with the testing and teaching strategies of the teachers,” and “A fantastic job is being done with this program. Keep up the hard work and dedication to teaching the students.” [12/9/21 N.T. at 3654 (Waite); LR-00959-00003 to 00004]

981. Shenandoah Valley offers its high school students several honors and AP courses, including Music Theory, Calculus, U.S. History, and European History. [12/9/21 N.T. at 3600–01 (Waite)]. Approximately 9.6% of Shenandoah Valley high school students take AP courses. [12/8/21 N.T. at 3529 (Waite)].

982. Shenandoah Valley also offers dual-enrollment classes to seniors ranked in the top 25 of their class through its Young Scholars program. Through this program, students take college-level courses approved by Shenandoah Valley and receive both high school and college credit through the Lehigh-Carbon Community College. As of the current school year (2021-22), Shenandoah Valley offers students four dual-enrollment courses: Research and Composition, Introduction to Psychology, Speech, and Introduction to Sociology. [12/9/21 N.T. at 3615–16 (Waite); LR-01787-00032].

983. Approximately 33.7% of Shenandoah Valley students are taking rigorous courses of study, including 26.5% of students who are enrolled in college courses; 9.6% participating in AB/IB programs; and 3.6% participating in Career and Technical Education. [12/8/21 N.T. at 3529-30 (Waite); PX-02964-0009].

984. Shenandoah Valley offers students an opportunity to take career and technology courses through the Schuylkill Technology Center. Through these courses, students gain “the basic technical skills to assist all students to prepare for a career in tomorrow’s high-tech workforce and enable students to get a head start on post-secondary careers. Programs offer basic entry level skills with hands-on training on computerized and technical equipment.” [12/9/21 N.T. at 3622; LR-01787-00037].

985. As of the current school year (2021-22), the Schuylkill Technology Center offers courses in:

- a. Architecture and Construction: carpentry, computer aided drafting, masonry, plumbing & heating technology, and residential/industrial electricity;
- b. Health Careers;
- c. Human Services: cosmetology, culinary arts, occupational child care, ornamental horticulture/environmental landscaping;
- d. Computer Information Systems;
- e. Manufacturing: electromechanical technology, machine trades technology, welding technology;
- f. Marketing; and
- g. Transportation, Distribution & Logistics: automotive technology, collision repair & custom refinishing, and small engine technology.

[12/9/21 N.T. at 3624–26 (Waite); LR-01787-00037 to00038].

986. Schuylkill Technology Center programs of study have articulation agreements to various post-secondary and higher education institutions, providing for advanced placement and advanced skill opportunities. [12/9/21 N.T. at 3623 (Waite); LR-01787-00037].

987. Among Shenandoah Valley’s business education courses is its Y.E.S. Certificate Program, short for “Your Employability Skills.” The Y.E.S. Certificate Program is a one-credit, 120-hour, yearlong elective course targeted at 12th-grade students. Through this program, “students participate in plant/business tour(s) throughout the year and business professionals present in the classroom to further discuss the modules and how they are applied in the work environment. Key areas of study include communication, teamwork, personal development, technology, safety and health, quality of work, and the development of reading and math skills.” [12/9/21 N.T. at 3613; LR-01787-00027].

988. Shenandoah Valley teachers provide after-school tutoring to students in 7th through 12th grade. [12/9/21 N.T. at 3691–92 (Waite)].

iii. Teachers and Staff

989. As of the 2020-21 school year, Shenandoah Valley had 82 classroom teachers, all of whom are certified to teach in Pennsylvania. [12/9/21 N.T. at 3674 (Waite); LR-05050A-00008].

990. As of the 2018-19 school year, Shenandoah Valley rated all of its teachers satisfactory or proficient. [LR-05050A-00002]. Of the 420 teacher evaluations that Shenandoah Valley performed between 2014-15 and 2018-19, only one teacher was rated as needing improvement, but was still rated as satisfactory. Of the remaining teacher ratings, 391 were proficient and 28 were distinguished. [LR-05050A-00002]. During Mr. Waite’s tenure as superintendent, two teachers have been rated unsatisfactory. Both were removed from their teaching positions due to their job performance. [12/9/21 N.T. at 3681-82 (Waite)].

991. As of the 2020-21 school year, Shenandoah Valley teachers have an average of fifteen years of experience and, on average, have taught at Shenandoah Valley for 12.8 years. [LR-05050A-00006].

992. Shenandoah Valley provides a comprehensive teacher induction program, including assignment of teacher mentors and instruction in research-based instructional models. Inductees are taught to assign challenging work to diverse student populations in accordance with Shenandoah Valley's Differentiated Supervision Plan. [12/9/21 N.T. at 3688-89 (Waite); LR-00924-36].

993. In the 2020-21 school year, teachers at Shenandoah Valley made an average salary of \$55,416.73, which is nearly \$10,000 higher than the average teacher's salary in the 2012-13 school year. [LR-05050A-00006]. The median household income in Shenandoah Valley is \$38,346. [12/8/21 N.T. at 3378 (Waite); PX-04886]. Accordingly, the average Shenandoah Valley teacher earns approximately \$17,070 more than the median household income in the district.

994. Shenandoah Valley elementary school teachers attend a variety of workshops and trainings on reading and math throughout the year. [12/9/21 N.T. at 3655 (Waite)]. These professional education opportunities are designed to increase educators' teaching skills based on effective practice research, provide educators with classroom-based assessment skills and data analysis, and empower educators to work effectively with parents and community partners, among other things [LR-00924-00034].

995. Shenandoah Valley has four English Language Learner teachers and is currently in the process of hiring a fifth one. [12/8/21 N.T. at 3386,3395 (Waite)].

996. Shenandoah Valley has a junior-high and high-school music teacher who directs the band. The high school music teacher and the music program have received recognition and awards from the National Association of Music Merchants. [12/9/21 N.T. at 3689-90 (Waite)].

997. In the 2020-21 school year, Shenandoah Valley reported having 179 professional and support personnel. That number included 97 professional personnel; 48 full-time support staff; and 33 part-time support staff. [LR-05050A-00008].

998. Shenandoah Valley has eleven administrators. Shenandoah Valley employs a superintendent, business manager, assistant business manager, director of transportation, director of facilities, director of technology, and special education director, and both schools have principals and assistant principals. [12/9/21 N.T. at 3581 (Waite)].

999. Shenandoah Valley has a social worker-behavior interventionist on staff, who has helped students develop social skills and re-integrate into the school community. [12/8/21 N.T. at 3451–55 (Waite)]. The District is looking to hire another social worker using its ESSER funds. [12/8/21 N.T. at 3455 (Waite)].

1000. Approximately 63% of Shenandoah Valley professionals (61 out of 97) have a master's degree or higher. [LR-05050A-00007].

iv. Facilities

1001. Shenandoah Valley consists of one campus that includes two classroom buildings: one for 4-K through 6th grade and a second building for 7th through 12th grades. [12/8/21 N.T. at 3377 (Waite)]. Shenandoah Valley added an addition onto its school campus in 2012. [12/9/21 N.T. at 3721 (Waite)].

1002. Shenandoah Valley has a variety of special needs classrooms. It has two emotional support classrooms, a deaf and hard-of-hearing classroom, and three life skills classrooms for students with intellectual disabilities. Each of those classrooms has a certified special education teacher and three paraeducators. [12/8/21 N.T. at 3403 (Waite)]. In total, Shenandoah Valley has ten teachers assigned to lower-need special education and seven for higher-need special education, along with four teachers assigned to English Language learners. [12/8/21

N.T. at 3405 (Waite)]. The teachers and paraprofessionals in high-need classrooms work only with those students, not with any general education students. [12/9/21 N.T. at 3847 (Waite)].

v. Instrumentalities of learning

1003. Prior to the COVID-19 pandemic, Shenandoah Valley increased its number of Chromebooks for students from eight to twenty carts. Currently, every student in Shenandoah Valley has his or her own Chromebook laptop. [12/9/21 N.T. at 3736, 3830 (Waite)].

1004. At Shenandoah Valley High School, computer laboratories and mobile computer laboratories are provided to students to ensure use and application of computers and software, including word processing, databases, spreadsheets, and telecommunications. [LR-00924-00005].

1005. Shenandoah Valley has used ESSER funds to upgrade Internet technology. [12/9/21 N.T. at 3737 (Waite)].

1006. Since 2015, Shenandoah Valley has purchased new print textbooks for AP Calculus and a variety of new digital textbooks for social studies, science, and English Language Arts. [12/9/21 N.T. at 3738–39 (Waite)].

vi. Finances

1007. In its budget for the current school year (2021-22), Shenandoah Valley anticipates receiving \$18,745,269 in revenue, consisting of \$5.1 million in local funding, \$12.6 million in state funding, and \$878,000 in federal funding. [12/9/21 N.T. at 3783 (Waite); PX-04572-0007].

1008. In the 2019-20 school year, Shenandoah Valley received \$10,960.23 in state revenue per ADM, placing it in the top 20% of schools in Pennsylvania in state revenue per ADM. [12/8/21 N.T. at 3484 (Waite); PX-04888].

1009. From 2016 to 2020, Shenandoah Valley increased its general fund balance from \$2.3 million to \$5.8 million. On average, Shenandoah Valley's general fund balance increased by \$700,000 per year over that time frame. [12/9/2021 N.T. at 3563 (Waite); LR-03196]. Comparatively, it costs the district approximately \$60,000 to hire a new employee. [12/9/21 N.T. at 3565 (Waite)]. Shenandoah Valley could have used the \$3.5 million in fund growth to hire additional employees. [12/9/2021 N.T. at 3567–68 (Waite)].

1010. Shenandoah Valley's 2020-21 general fund budget anticipated an ending fund balance of \$3.7 million. When it completed its current budget, Shenandoah Valley revised that number up to \$6.1 million. [12/9/21 N.T. at 3780 (Waite); PX-04563, PX-04572]. Mr. Waite recognizes that this was a significant increase. [12/9/21 N.T. at 3781 (Waite)].

1011. In the budget for the current school year (2021-22), Shenandoah Valley projects a total ending fund balance of \$5,885,878. That includes an unassigned fund balance of \$1,520,878. [12/8/21 N.T. at 3776 (Waite); PX-04572-0026]. Although Shenandoah Valley anticipates receiving approximately \$7.3 million in additional ESSER funds over the next three years, it has not included any of these funds in its budget for the current school year. [12/9/21 N.T. at 3789-90 (Waite)].

1012. Rather than using existing fund balances to hire additional English Language teachers to support the increase in its ELL student population, Shenandoah Valley is attempting to hire an additional ELL teacher with ESSER funds. [12/8/21 N.T. at 3394-95 (Waite)].

1013. Shenandoah Valley received Level-Up supplemental funds this year as part of the Basic Education Funding appropriation. [12/8/21 N.T. at 3534 (Waite)].

1014. So far, Shenandoah Valley has received \$550,000 in ESSER I funding. The district has used its ESSER funds to purchase Chromebooks and PPE for students, as well as internet connectivity and transportation. In the future, the District plans to use ESSER funds to update heating and ventilation systems, and upgrade its air-conditioning systems. All classrooms currently have a window air-conditioning unit. [12/8/21 N.T. at 3506–07 (Waite); 12/9/21 N.T. at 3735 (Waite)]. Shenandoah Valley has also used ESSER funds to purchase textbooks for online learning. [12/8/21 N.T. at 3739 (Waite)].

vii. Extracurricular Activities and Athletics

1015. Students at the high school can participate in cross-country, football, volleyball, basketball, golf, softball, baseball, wrestling, and soccer. [12/8/21 N.T. at 3479 (Waite)].

1016. The high school has a marching band and a concert band open to any students who want to join. [12/9/21 N.T. at 3817–18 (Waite)]. Students in 5th and 6th grades may also participate in the band. [12/8/21 N.T. at 3421 (Waite)].

1017. Additionally, Shenandoah Valley students can participate in Band Front, Drama Club, Student Council, National Honor Society, and Yearbook. [Shenandoah Valley's Response to Senator Scarnati's Fifth Set of Interrogatories, Interrogatory No. 1 (Dec. 16, 2019)].

1018. Shenandoah Valley students also have access to a STEM ecosystem, which offers students opportunities and resources for learning in STEM fields. [12/9/21 N.T. at 3773-75 (Waite)].

viii. Class Size

1019. As indicated by its District Level Plan prepared in 2018, Shenandoah Valley had an average student-teacher ratio of 13-to-1 at that time. [12/9/21 N.T. at 3715 (Waite); LR-

00924-00004]. In the 2020-21 school year, Shenandoah Valley had a student-teacher ratio of 12.2-to-1 and a student-to-staff ratio of 5.6-to-1. [LR-05050A-00009].

1020. Between the 2015-16 and 2018-19 school years, the class sizes in kindergarten through 3rd grade reached or exceeded 23 students only five times. As shown by class size data from Shenandoah Valley from 2015-16 to 2018-19, the majority of the time, class sizes were 19 students or less. [12/9/21 N.T. at 3705–07 (Waite); LR-00962].

1021. As of December 2019, Shenandoah Valley Elementary School Pre-K classes were between 15-17 students; kindergarten classes were between 17-19 students; 1st through 3rd grade classes were between 17-21 students; 4th and 5th grade classes were between 22-27 students; and 6th grade classes were between 25-29 students. [12/9/21 N.T. at 3708-09; LR-00956].

ix. Student Supports

1022. Shenandoah Valley has a school-wide behavior support program in its elementary school. [12/9/21 N.T. at 3695 (Waite)].

1023. Shenandoah Valley offers at-risk Kindergarten through third-grade students extended school day and tutoring programs for reading and math, as well as after school instructional support, in-class instructional support, and pull-out instructional support. [12/9/21 N.T. at 3661-62 (Waite); LR-00959-00023].

1024. Shenandoah Valley offers students the opportunity to participate in the SHINE program, which stands for “School Home in Education.” The SHINE program is an after-school program that helps students in kindergarten through 6th grade with homework and provides those students with meals. [12/9/21 N.T. at 3650, 3772–73 (Waite)]. As part of the SHINE program, participating students also visit kindergarten students in their homes to see how the kindergarten students are handling school. [12/9/21 N.T. at 3733–34 (Waite)].

1025. The district offers a summer program for its English Language Learners. [12/9/21 N.T. at 3696 (Waite)].

1026. Shenandoah Valley also has the Successful Student Partnership Program, which is a homework assistance program designed to increase student achievement and graduation rates by offering tutoring services to students in need every Monday through Thursday. Students receive assistance from qualified teachers and peer tutors in all subject areas. [12/9/21 N.T. at 3693-94 (Waite); LR-00981].

x. Pre-K

1027. Shenandoah Valley offers a Pre-K program called “4K” that is paid for through the district’s general fund budget. [12/9/21 N.T. at 3664–65 (Waite)]. During the 2018-19 school year, 4K students showed a 32% increase in the number of students at or above benchmark on the Pennsylvania Early Literacy Indicators assessment. [12/9/21 N.T. at 3666–67 (Waite); LR-00959].

1028. Approximately 67% of Shenandoah Valley students go through the 4K program. [12/9/21 N.T. at 3669 (Waite)].

1029. In May of 2019, after Shenandoah Valley added a third section of Pre-K, class sizes in the 4K program were between 11-16 students. In December of 2019, Pre-K class sizes were between 15-17 students. [12/9/21 N.T. at 3704-09 (Waite); LR-00962-00010, LR-00956].

1030. Shenandoah Valley partners with Intermediate Unit 29 to offer early intervention programs. [12/9/21 N.T. at 3668–69 (Waite)].

xi. Student Outcomes

1031. In the 2019-20 school year, Shenandoah Valley’s 4-year cohort graduation rate was 87.18%. [12/9/21 N.T. at 3740 (Waite); LR-05050A-00003].

1032. In 2018-19, Shenandoah Valley met growth expectations for the ELA PSSA, and Algebra I and Literature Keystone exams. [LR-05050A-00001].

1033. In 2017-18, Shenandoah Valley met the growth standard for the Algebra I and Biology Keystone exams. The district also exceeded the growth standard for the Literature Keystone exam. [LR-05050A-00001].

1034. In 2016-17, Shenandoah Valley exceeded the growth standard for the ELA PSSA exam. [LR-05050A-00001].

1035. In the 2018-19 school year, 99.46% of Shenandoah Valley elementary students were promoted to the next grade level. [LR-05050A-00004].

1036. Shenandoah Valley requires graduating students to demonstrate proficiency in English language arts, mathematics, science and technology, and environment and ecology. Proficiency is determined through locally approved and administered assessments that are designed by teachers. [12/9/21 N.T. at 3741-43; LR-00924-00016].

1037. In the 2018–19 school year, 80% of grades given to Shenandoah Valley middle and high school students were an A, B, or C. Additionally, 94% of grades given to elementary school students were an A, B, or C. [LR-05050A-00012; LR-01787-00013].

1038. As stated in Shenandoah Valley’s course guide, A is “excellent,” B is “good,” C is “fair,” and D is “poor.” This grading scale applies in elementary school as well. [12/9/21 N.T. at 3744-45; LR-01787-00013].

1039. As of the 2019-20 school year, approximately 60.81% of Shenandoah Valley high school graduates intended to pursue post-secondary education. [LR-05050A-00010].

1040. Based on Shenandoah Valley High School's 2019-20 Future Ready PA Index, 11.5% of graduates enlisted in the military and 46.2% entered the Pennsylvania workforce. [LR-05050A-00011].

1041. In one recent year, Shenandoah Valley students received acceptances from 36 different universities with scholarships totaling \$1.7 million. [12/9/21 N.T. at 3760–61 (Waite); LR-01951].

1042. On the Future Ready PA Index's Career Standards Benchmark for the 2019-20 school year, Shenandoah Valley scored 99.3%, which was higher than the state average of 89.8%. [12/8/21 N.T. at 3522 (Waite); PX-2964-0007]. Similarly, on the Future Ready Index for the current school year (2021-22), Shenandoah Valley's elementary students scored higher than the statewide average for academic growth in English/Language Arts and Mathematics/Algebra. [12/9/21 N.T. at 3589 (Waite); LR-4107-00001, 00002].

1043. Shenandoah Valley uses an assessment tool called Acadience math. In the 2018-19 school year, third grade students improved from 32% to 74% above-baseline on the Acadience math program. [12/9/21 N.T. at 3657 (Waite); LR-00959-00006].

1044. PSSA and Keystone scores are not part of Shenandoah Valley's graduation requirements; instead, standardized tests are "only one way to assess a student's abilities." [12/9/21 N.T. at 3764 (Waite)].

1045. Shenandoah Valley's high rate of English-learning students can skew its test scores, as students' difficulties with the English language influences their ability to score advanced or proficient on standardized tests. [12/9/21 N.T. at 3799 (Waite)].

E. Wilkes-Barre School District

i. Background

1046. Wilkes-Barre presented the testimony of its current Superintendent, Brian Costello (“Dr. Costello”). [1/25/22 N.T. at 10643 (Costello)]. Additionally, the Court was provided with the designated deposition testimony of the District’s business administrator, Thomas Telesz (“Mr. Telesz”), whom Petitioners did not call as a trial witness. [Parties’ Joint Designations of the 1/30/2020 Deposition of Thomas Telesz (hereinafter, “Telesz Dep.”) at 7:7-15].

1047. Located in Luzerne County, Wilkes-Barre “has a rich tradition of academic excellence, athletic competitiveness and social and community involvement.” [1/26/22 N.T. at 10886-87 (Costello)].

1048. Wilkes-Barre operates nine schools with total student enrollment of 7,089 students as of 2020-21. [1/25/22 N.T. at 10648 (Costello); LR-05069A-00005].

1049. Wilkes-Barre’s nine schools include five elementary schools (Kistler, Dan Flood, Heights, Solomon and Macklin); two middle schools (GAR and Solomon-Plains); and Wilkes-Barre Area High School. The District also operates a STEM Academy located within the high school. [1/25/22 N.T. at 10649 (Costello)].

1050. Wilkes-Barre operates as distinct programs within its high school a Creative and Performing Arts Academy (“CAPAA”). In addition, Wilkes-Barre now has a Business Academy, which started during the current school year with twenty students. [1/25/22 N.T. at 10657-58 (Costello)].

1051. Wilkes-Barre has a cyber-school program that serves approximately 400 students. The district pays between \$50,000 and \$75,000 for the whole program, which provides unlimited seats for the cyber-school. [1/26/22 N.T. at 10855-56 (Costello)].

1052. Wilkes-Barre Area High School is a brand new facility opened for the 2021-22 school year with a \$123 million bond offering. The new high school is a consolidation of three high schools that had previously existed in the District, James M. Coughlin High School (“Coughlin”), E.L. Myers High School (“Myers”) and GAR High School. [1/25/22 N.T. at 10649-50, 10731 (Costello)]. The new high school itself cost approximately \$83 million to build. [1/26/22 N.T. at 11015 (Costello)].

1053. Wilkes-Barre is a racially diverse school district with high levels of poverty. As PDE data shows, approximately 80% of its students are economically disadvantaged. [1/25/22 N.T. at 10736 (Costello)]. As a result of economic disadvantage within the community it serves, many of the district’s students come to school with non-school-related challenges that can impact upon their learning. For instance, as Dr. Costello testified: “Food is a concern for students with economically disadvantaged [sic], hot [meals]. Sometimes the parents are working multiple jobs and they’re unable to be with their families - or, with their children at night after school, and they’re unable to help or assist a student - a child with a project or homework. And even with healthcare, some of our families don’t have the ability to provide the necessary healthcare that they need, the attention that students need when they’re sick.” [1/25/22 N.T. at 10738-39 (Costello)].

1054. Because of these outside factors, many students enter Wilkes-Barre’s school system already behind in the literacy skills that they may need to succeed. [1/25/22 N.T. at 10738 (Costello)].

1055. Despite these challenges, the district presents “many opportunities” to its students. [1/26/22 N.T. at 10969 (Costello)].

1056. According to its District Level Plan, Wilkes-Barre schools “offer a variety of programs for student participation, both academic and extracurricular. Tutoring programs,

remediation services, as well as content area clubs exist in all schools.” [1/26/22 N.T. at 10893-94 (Costello); LR-01113-00005]. Dr. Costello confirmed that this remains true today, except that certain remediation services (such as the district’s foster grandparents program) have been paused because of COVID, while other remediation services (such as a summer school program centered on project-based learning) have been added with ESSER funds. [1/26/22 N.T. at 10893-95 (Costello)].

1057. In his superintendent’s message to the community posted on the district’s website, Dr. Costello summarized that “Graduates of Wilkes-Barre Area School are not only prepared for post-secondary education, but are also leaders within the community, armed services, and possess the necessary skills to be productive members of the workforce.” [1/26/22 N.T. at 10884 (Costello); LR-01778]. Dr. Costello agreed at trial, the language contained in his Superintendent’s Message provides an accurate picture of the quality of the education being delivered in the District. [1/26/22 N.T. at 10886 (Costello)].

ii. Academic Offerings/Curricula

1058. The parties offered extensive evidence regarding the curricula, course offerings and academic programs provided by Wilkes-Barre.

1059. Wilkes-Barre offers a “dynamic, comprehensive curriculum” that is aligned with state standards in all “major subjects.” [1/26/22 N.T. at 10838-39, 10887 (Costello)].

1060. The courses offered to Wilkes-Barre students in grades 7-12 were set forth in Wilkes-Barre’s Program of Studies and further discussed during Dr. Costello’s testimony. In middle school, all Wilkes-Barre seventh grade students have a class in reading and a class in English. The class in English forms a foundation for the Integrated Language Arts Program, which “provides holistic instruction in reading, writing, listening, speaking, and research skills; understanding fiction and nonfiction components within/beneath texts, literary devices and

organizational concepts within text assist in both understanding literature and developing reading skills. Students focus on various types of literature such as short story, novel, poetry and nonfiction. Students learn the five domains of effective writing by producing works in the expository/informative, persuasive, and narrative modes. Students also begin the process of research, while speaking and listening skills are developed through oral presentations.” [1/26/22 N.T. at 10923-24 (Costello); LR-04078-00008]. Similarly, eighth grade English “continues to form a solid foundation for the secondary English Language Arts Program.” [1/26/22 N.T. at 10928 (Costello); LR-04078-00008].

1061. Ninth grade English in the district “continues to emphasize instruction in integrated reading, writing, listening, speaking, grammar, usage, and research. The literature includes a variety of genres, including short story, poetry, prose forms, and drama. Students are exposed to a broad range of types of literature through the American, British, and world selections presented through the text. Students utilize the five domains of effective writing while producing works in the expository/informative, persuasive, and narrative modes. Students also continue the process of research as they compose a research paper.” [1/26/22 N.T. at 10931-32 (Costello); LR-04078-00009].

1062. Tenth grade English includes “a blend of reading, writing, and speaking skills. Students are required to read and analyze American literature in order to experience fundamental features of diverse literary styles and genres.” [1/26/22 N.T. at 10932 (Costello); LR-04078-00010].

1063. Eleventh grade English focuses on British literature, including Shakespeare, Chaucer, Swift, and Orwell. Twelfth grade English “complements all previous integrated language

arts instruction as it prepares students to participate in the global community.” [1/26/22 N.T. at 10933 (Costello); LR-04078-00011].

1064. The Wilkes-Barre high school English department also offers many electives, including Journalism, Public Speaking I & II, AP English, Cultural Perspectives through Children’s Literature, Literature in Film and Creative Writing. [1/26/22 N.T. at 10934 (Costello); LR-04078-00013, 00015].

1065. In mathematics, Wilkes-Barre seventh graders take classes in either Pre-Algebra A or Advanced Pre-Algebra. Eighth grade students who successfully complete Pre-Algebra A (which requires a grade of 70 or higher) will take Pre-Algebra B, while students who complete Advanced Pre-Algebra will move on to Advanced Algebra. [1/26/22 N.T. at 10943-44 (Costello); LR-04078-00030].

1066. Starting in ninth grade, Wilkes-Barre offers three different math tracks, so that students who took Advanced Algebra in eighth grade will take Algebra II in ninth grade, and students who took eighth grade Pre-Algebra B will move on to either Concepts of Algebra or Algebra I. In tenth grade, Wilkes-Barre students take Algebra I, Algebra II or Geometry. In eleventh grade, students take Algebra II, Geometry or Algebra III/Trigonometry. [1/26/22 N.T. at 10944-45 (Costello);LR-04078-00030].

1067. Other courses offered by Wilkes-Barre’s high school mathematics department include Advanced Geometry, Trigonometry, Pre-Calculus, Calculus, AP Calculus, Consumer Applications, College-Ready Math, and Probability and Statistics. [1/26/22 N.T. at 10945-46 (Costello); LR-04078-00033, 00035].

1068. In social studies, Wilkes-Barre middle school students learn about world history and cultures. In seventh grade, they take World Cultures, which covers “major geographic,

cultural, historic and global events in addition to major cities, world landmarks and wildlife.” In eighth grade, students take Western Civilization, which “examines world history and the rise of early civilizations to the exploration of the Americas.” In ninth grade, students take U.S. History. [1/26/22 N.T. at 10936-37 (Costello); LR-04078-00022, 00023].

1069. Wilkes-Barre’s high school social studies department also offers AP U.S. History, Civics and Economics, Psychology, AP Psychology, Political Science, Law in America, Art in History, Modern U.S. History, Sociology, and Holocaust History. [1/26/22 N.T. at 10942-43 (Costello); LR-04078-00022].

1070. In science, Wilkes-Barre again offers two different tracks in seventh and eighth grade. Students can take either Science 7 and Science 8 or Advanced Science 7 and Advanced Science 8. [1/26/22 N.T. at 10948 (Costello); LR-04078-00039].

1071. At the high school level, ninth graders take Environmental Science or Biology 1 Advanced; tenth graders take Biology 1 or Chemistry 1 Advanced; and Eleventh graders take Chemistry 1, Earth & Space Science, Physics 1 Advanced or a science elective. [1/26/22 N.T. at 10948-49 (Costello); LR-04078-00039].

1072. Science electives offered at Wilkes-Barre’s high school include Anatomy and Physiology, Chemistry 1, Physics 1, Biology 2, Advanced Chemistry 2, Earth and Space, AP Biology, AP Chemistry, and AP Physics. [1/26/22 N.T. at 10949 (Costello); LR-04078-00039].

1073. Wilkes-Barre’s high school foreign language department offers elective classes in Spanish I through IV, German I through IV, and French I through IV. [1/26/22 N.T. at 10936 (Costello); LR-04078-00017].

1074. Wilkes-Barre offers Introduction to Computer Applications, which introduces students to keyboarding and Microsoft Suite applications. Every student in Wilkes-

Barre is required to take an introduction to computers course. [1/26/22 N.T. at 10950-51 (Costello); LR-04078-00047].

1075. Wilkes-Barre also offers Computer Programming 1, 2, and 3 to its high school students. Computer Programming 3 includes “advanced topics including multidimensional arrays, recursion, polymorphism, and algorithm analysis, all while using the Java programming language. The second semester includes other computer programming concepts including HTML5, Unity development engine, et cetera.” [1/26/22 N.T. at 10946-47 (Costello); LR-04078-00036, 00037].

1076. Wilkes-Barre’s high school Business Department offers courses in Accounting 1, Accounting 2, Advanced Software Applications for Business and Industry, Advanced Business Application Skills. [1/26/22 N.T. at 10952-53 (Costello); LR-04078-00046 to 00048].

1077. Wilkes-Barre offers General Music twice a week to all seventh and eighth grade students. The course is designed so students “may develop an awareness for music, may become familiar with music vocabulary and the sound of various musical styles from different cultures, may gain a knowledge of instruments of the orchestra and the lives of various composers, and may learn proper vocal techniques through classroom singing in a non-performance environment.” Before the COVID-19 pandemic, students could take instrumental music, orchestra, chorus, and band, and Dr. Costello hopes to restore those programs. [1/26/22 N.T. at 10953-55 (Costello); LR-04078-00053].

1078. Wilkes-Barre created its high school STEM Academy in 2015, which had approximately 70 students participating in it as of Dr. Costello’s trial testimony in January 2022. [1/25/22 N.T. at 10653-54 (Costello)]. 50% of STEM Academy participants are economically

disadvantaged. Approximately 53% of STEM Academy participants are female and 46% are male. [1/25/22 N.T. at 10665-66 (Costello); PX-02997-0001].

1079. The STEM Academy has been so successful that students have moved into the Wilkes-Barre Area School District just to attend the STEM Academy. [1/26/22 N.T. at 11026 (Costello)].

1080. The STEM academy offers courses including Principles of Engineering, Civil Engineering and Architecture, Environmental Sustainability, and Computer Science Principles. [1/26/22 N.T. at 11088 (Costello); LR-01137].

1081. Wilkes-Barre's CAPAA program also "has had great success," as Dr. Costello explained. [1/25/22 N.T. at 10657 (Costello)]. CAPAA offers courses including Music, Choral/Vocal Performance, Music and Instrumental Performance, Theatre Arts and Visual Arts, and Dance. [1/26/22 N.T. at 11093 (Costello); LR-01156].

1082. Wilkes-Barre started its Business Academy this year with twenty students. Discussing the Business Academy, Dr. Costello said, "That program has already been extremely successful." [1/25/22 N.T. at 10657-58 (Costello)]. The mission of the Business Academy is to "provide students with an integrated program of academic subjects and competitive business practices, preparing them for post-secondary education or entering the workforce with competitive business skills." [1/26/22 N.T. at 11091-92 (Costello); LR-01155]. The Business Academy offers classes including Foundations of Business, Mobile Apps and Web Design, and Professional Communication and Leadership. [1/26/22 N.T. at 11090 (Costello); LR-01154].

1083. Wilkes-Barre participates in a Career and Technical Center, which is a partnership between Wilkes-Barre and several other school districts in the region. [1/26/22 N.T. at 10958 (Costello)]. This Center currently offers a nursing program, and while Dr. Costello was

unsure about other current programming, he stated, Wilkes-Barre students had previously participated in the Culinary Arts, Warehousing, Law Enforcement, Graphic Design, and Audio-Visual Media programs. [1/26/22 N.T. at 10962-63 (Costello)]. Any Wilkes-Barre student in grades 9-12 who desires to participate in a CTC program can spend half of their school day at the Career and Technical Center. 1/26/22 N.T. at 10958-59 (Costello)].

1084. Wilkes-Barre offers a dual enrollment program to its high school students through agreements with King's College, Luzerne County Community College, Misericordia University, and Wilkes University. [1/26/22 N.T. at 11097-99 (Costello); LR-01910].

1085. Wilkes-Barre has a Saturday program called Project RAISE in two of its elementary schools, where students learn skills through project-based learning. [1/26/22 N.T. at 10980-81 (Costello); LR-01086-00004].

1086. Wilkes-Barre's graduation requirements are set by the school district. Among other things, the district requires four credits in English and three each in math, social studies and science, with a minimum grade of 70 percent required to receive class credit. [1/26/22 N.T. at 10908-11 (Costello); LR-01113-00016]. Passing a class signifies that "the student met the minimum requirements of the coursework and they completed that coursework to achieve a 70 within that course." [1/26/22 N.T. at 10926 (Costello)].

1087. As the district has affirmed in its District Level Plan, its graduation requirements require a demonstration of proficiency or above in ELA, mathematics, science and technology, and environment and ecology. [1/26/22 N.T. at 10912 (Costello); LR-01113-00016, 00017]. Dr. Costello testified, a diploma from Wilkes-Barre is a "stepping stone" for a student to pursue a career or to continue their education. [2/26/22 N.T. at 10865-66 (Costello)].

1088. Wilkes-Barre’s five-year cohort graduation rate for the five most-recent years of available data is: 2019-20 - 85.40%; 2018-19 - 88.05%; 2017-18 - 86.68%; 2016-17 - 88.97%; and 2015-16 - 89.81%. Its graduation rate for economically disadvantaged students is 83.71% in 2019-20; 88.36% in 2018-19; 85.78% in 2017-18; 87.43% in 2016-17; and 87.54% in 2015-16. In four of the past five years, Wilkes-Barre’s five-year graduation rate for economically disadvantaged students was above the state average in that category. Further, the District’s five-year graduation rate for economically disadvantaged students in 2018-19 and 2019-20 was above the measure of interim progress set in the State’s ESSA Plan. [LR-05077A].

1089. In the 2020 school year, 62% of graduating Wilkes-Barre students intended to attend a post-secondary institution; 29% intended to join the workforce; and 3% intended to join the military. Similarly, in the 2018 school year, 69% intended to go to a post-secondary institution. [1/26/22 N.T. at 11084-87 (Costello); LR-01058, LR-01127].

iii. Teachers and Staff

1090. In 2020-21, Wilkes-Barre had 953 reported professional and support personnel, comprised of 506 professional personnel (18 administrators and 437 classroom teachers); 312 full-time support staff; and 135 part-time support staff. [LR-05069A-00006].

1091. In 2020-21, the average classroom teacher at Wilkes-Barre had 17.6 years of teaching experience and 17.6 years of experience in the district. [LR-5069A-0006]. The experience level of Wilkes-Barre’s teachers has increased every year for the past decade. In 2012-13, the average classroom teacher had 12.4 years of teaching experience and 11.7 years of experience in the district. [LR-05069A-00006]. In 2020-21, 425 out of 507 professional educators in the district had a master’s degree or higher. [LR-05069A-00006].

1092. Wilkes-Barre teachers are highly rated on district evaluations. For the 2018-19 school year, no teachers were rated “failing” or “unsatisfactory.” Six teachers were listed

as “satisfactory,” while 356 teachers were rated “proficient” and 104 were “distinguished.” [1/26/22 N.T. at 10966-67 (Costello); LR-00458, “2018_2019 LEA SD Totals” Tabl, Line 481].

1093. Wilkes-Barre has 11 building administrators, one for each elementary and middle school, and four at the high school. [1/25/22 N.T. at 10764 (Costello)].

1094. Wilkes-Barre provides professional development to its teachers, including instruction on administering PSSA tests, Keystone tests, and best practices for technology. [1/26/22 N.T. at 10903 (Costello)]. The district schedules between seven and eight half-days of teacher professional development per year. [1/26/22 N.T. at 10904 (Costello)].

1095. For the current school year, Wilkes-Barre’s teacher salaries ranged from \$46,115 for a first-year teacher with a Bachelor’s degree to \$85,989 for a teacher with a Ph.D. and 15 years or more of experience. [1/26/22 N.T. at 11059 (Costello); LR-01063-00044]. The average teacher salary in the district as of 2020-21 was \$73,329. [LR-05069A-00006].

1096. From 2011 to 2015, Wilkes-Barre teacher salaries were above the state average. After negotiations in 2016, Wilkes-Barre teacher salaries are now closer to the state average. [1/26/22 N.T. at 11000-01 (Costello); LR-01086-00007].

1097. Teachers, secretaries, and other educational support personnel all receive the same healthcare coverage from Wilkes-Barre. Staff with at least two years of experience receive full family PPO health coverage, full dental coverage, and full vision coverage at the district’s sole cost. The cost of full family coverage to the district is about \$29,000-30,000 per teacher per year. [1/26/22 N.T. at 11059-60 (Costello); LR-01063-00033].

iv. Facilities

1098. Wilkes-Barre’s new state-of-the-art high school includes an auditorium for 1100 students; a gymnasium with two gyms and a track; a student bookstore; a student video production facility called Wolf Pack Live; a STEM facility, which includes a production area,

computer labs, collaborative spaces, and 3D printers; Creative and Performing Arts Academy music rooms; a Business Academy wing; a Learning Commons (library); and a fitness center with cardio equipment and free weights. The school also has five “pods,” each of which hold 32 classrooms, and one classroom wing has science labs with running water, hoods, and gas. [1/26/22 N.T. at 10825-27, 11023-26 (Costello)].

1099. The new high school has a natatorium with an eight-lane swimming pool and an Americans with Disabilities Act (ADA) ramp for access. As Dr. Costello explained, the pool will be open to the community. [1/26/22 N.T. at 10828-29 (Costello)].

1100. In addition to the new high school and adjacent natatorium, Wilkes-Barre is in the process of constructing a new multi-purpose field for its athletic teams. As Dr. Costello testified, the project has started and “[i]t’s approximately 9, 9-and-a-half million dollars at this point.” [1/26/22 N.T. at 10833 (Costello)].

1101. Regarding the new state-of-the art high school, as Dr. Costello agreed, “the building most certainly addressed all the physical needs that we have....” [1/26/22 N.T. at 11015 (Costello)]. Dr. Costello believes that residents of the district are “proud to have something like this within their community for their students to learn and receive an education in.” [1/26/22 N.T. at 11159 (Costello)]. All students currently enrolled in Wilkes-Barre, who continue to attend district schools, will be able to receive a portion of their education in that building. [1/26/22 N.T. at 11158-59 (Costello)].

1102. The district also has a capital improvement plan that has allowed it to “put away money to repair roofs and upgrade buildings.” [1/26/22 N.T. at 10995-96 (Costello); 1086-0006]. The capital improvements fund had \$5 million as of 2020, which had increased to approximately \$22-24 million as of the time of trial. [1/26/22 N.T. at 10995-96 (Costello)]. This

capital improvement plan, which goes out through 2032, includes deferred maintenance such as repairing roofs, caulking and cement work. [1/26/22 N.T. at 11074 (Costello)].

1103. As Dr. Costello testified, the primary impetus of establishing the capital reserve fund is that “we were scared day to day based on what we were seeing with our two high schools for the safety of our students. And that was something that we wanted to make sure moving forward that we began to establish was a capital reserve fund so that we would be able to provide the necessary maintenance that our buildings need.” [1/25/22 N.T. at 10692 (Costello)].

1104. Capital improvement projects that have already been completed or are in process include the GAR middle school façade; the Kistler elementary school roof; and the roof on the Kistler elementary school pool. [1/26/22 N.T. at 10996-98 (Costello)]. Additionally, the district anticipates fixing the roof at Solomon-Plains Elementary School in summer of 2022. [1/26/22 N.T. at 11074 (Costello)].

1105. The district intends to use ESSER funding to update or install HVAC systems. [1/26/22 N.T. at 11067 (Costello)].

1106. Petitioners presented evidence regarding maintenance and repair issues concerning two of Wilkes Barre’s former high school buildings, Coughlin and Meyers, including what Dr. Costello described as structural deficiencies giving rise to safety concerns. [1/25/22 N.T. at 10670-72, 10674, 10696-10725 (Costello); PX-03497, PX-03498; PX-03501, PX-03517, PX-03537; PX-03545, PX-03559, PX-03562, PX-03564, PX-03581, PX-03800, PX-03802].

1107. Following the construction of the new high school, Coughlin and Meyers are no longer used. The Coughlin building was sold for \$1.6 million and the Meyers building is listed for around \$3.5 million. The proceeds from the sale of these facilities will go into Wilkes-Barre’s capital reserve fund. [1/26/22 N.T. at 11069-70 (Costello)].

1108. Because the Petition seeks only forward-looking relief, the Court finds that evidence regarding the physical condition of school buildings that are no longer in use by the district are not relevant to the issues before the Court.

1109. Wilkes-Barre also showed photographs and provided testimony regarding the condition of four of its current school buildings: Flood Elementary, Heights Elementary, Kistler Elementary and GAR Middle School. [1/26/22 N.T. at 10801-21 (Costello)].

1110. In reviewing the evidence presented with respect to the condition of Wilkes-Barre's school buildings, the Court observes that the photographs were taken and selected by the district and represented only a small fraction of the space currently in use in Wilkes-Barre's school buildings. The photographs and testimony did not provide a complete picture of the facilities in Wilkes-Barre.

1111. Regarding Flood Elementary, Dr. Costello testified that water had caused delamination to occur to the exterior of the building and "some of the concrete is beginning to crumble." [1/26/22 N.T. at 10801-02 (Costello)]. Petitioners provided one photograph showing chipped and peeling concrete beneath one row of exterior windows at Flood Elementary. [PX-03631].

1112. Regarding Heights Elementary, Dr. Costello testified about a photograph depicting a small bathroom with a missing door on one of the stalls, which, as he acknowledged, has subsequently been replaced, and missing floor tiles [1/26/22 N.T. at 10804 (Costello); PX-03660]. Dr. Costello also testified about a photograph of a "typical classroom," which he characterized as being "tight," having mismatched chairs at the desks, and having cold temperatures, as evidenced by one child – out of approximately 12 children shown – wearing a coat. [1/26/22 N.T. at 10805-06 (Costello); PX-03695].

1113. With respect to Kistler Elementary, Dr. Costello discussed a photograph of a classroom that he characterized as “tight” and having “limited board space” on its Smart Board [1/26/22 N.T. at 10807-08 (Costello); PX-03715]; a photograph depicting a settlement crack outside of the school, which was identified as part of a constant review of the District’s buildings “to make sure that the structure integrity is still in place” [1/26/22 N.T. at 10809-10 (Costello) PX-03729]; a photograph of a small classroom that has been partitioned into two rooms [1/26/22 N.T. at 10811 (Costello); PX-03746]; a photograph showing a converted closet with two seats and a table, that is used for pull-out occupational therapy sessions [1/26/22 N.T. at 1081112 (Costello); PX-03756]; a photograph depicting a converted office area at Kistler Elementary being used as room for teacher to work with individual students [1/26/22 N.T. at 10812-13 (Costello); PX-03769]; and a photograph showing maintenance work needed in the diving well at Kistler Elementary’s six-lane natatorium. [1/26/22 N.T. at 10813-14 (Costello); PX-03798].

1114. Dr. Costello also reviewed a photograph showing “significant water damage” to a former band room at Kistler Elementary caused by a leaking roof in need of repairs, but, as he acknowledged, the room is not currently being used and “we just finished the repair of Kistler’s roof this year,” which the district believes will protect against further damage. [1/26/22 N.T. at 10807-08 (Costello); PX-03728].

1115. Regarding GAR Middle School, Dr. Costello discussed a photo of “extensive water damage” in an unidentified room at GAR Middle School [1/26/22 N.T. at 10815-16 (Costello); PX-03824]; a photograph showing plastic sheeting on the roof of GAR Middle School used to try to prevent water from entering the building [1/26/22 N.T. at 10816-17 (Costello); PX-03840]; a photograph showing water damage to ceiling tiles in the former library of GAR Middle School, which is now being used as an individual classroom [1/26/22 N.T. at

10817-18 (Costello); PX-03865]; and a photograph depicting a set of steps leading to one of GAR’s entrances, showing damage to façade of the exterior stairwell. [1/26/22 N.T. at 10818-19 (Costello); PX-03899].

1116. Dr. Costello also briefly discussed a photo of “the walkway that students would come to enter the building” at GAR Middle School, but, as he acknowledged, the protective fencing shown in the photograph has changed. [1/26/22 N.T. at 10815; PX-03814].

1117. Dr. Costello testified about a feasibility study prepared for the district by its outside consultants, which was initially adopted in December 2014 and subsequently revised in June 2015 and May 2016. [PX-03360-0001]. The feasibility study focused almost exclusively on the condition of the district’s former high schools. [1/25/22 N.T. at 10707-08 (Costello); PX-03360]. Although the feasibility study generally provides an estimate of “renovation” costs of the district’s other school buildings, no detail is provided as to what specific renovations are contemplated or if it includes any items that have already been repaired under the district’s capital improvement plan. [PX-03360-0039].

1118. Petitioners did not identify conditions in any district facilities currently in use in the instructional process that would pose a safety hazard to teachers or students. Further, while the District’s capital improvement project schedule is on a ten year time schedule, any needed maintenance or repairs that directly impact the health or safety of students “would be jumped to the front of the line.” [1/26/22 N.T. at 11075 (Costello)].

1119. It is undisputed that Wilkes-Barre’s new high school provides safe and adequate school facilities that are appropriately conducive to learning.

1120. Regarding its other school buildings, while some of the photographs presented by Petitioners depict conditions in Wilkes-Barre school buildings that are in need of

repair or otherwise less than ideal, the Court is cognizant that its role in this case is limited to determining whether a constitutional violation has occurred. The Court finds that the evidence did not indicate widespread insufficiencies in Wilkes-Barre school buildings that would support Petitioners' general characterization that Wilkes-Barre students are being educated in "crumbling" school buildings. Indeed, the Court observes that the two full classrooms depicted in the photographic evidence shown to the Court generally resembled what one would expect of a typical elementary school classroom. [PX-03695; PX-03715].

1121. For these reasons, the Court finds that Wilkes-Barre generally has safe and adequate school facilities that are appropriately conducive to learning, including a new state-of-the-art high school building.

1122. Therefore, the evidence presented regarding the school buildings currently in use in Wilkes-Barre School District does not support Petitioners' claim of a constitutional violation.

v. Instrumentalities of Learning

1123. The District began a one-to-one Chromebook initiative in 2016-17. [1/26/22 N.T. at 10974 (Costello)]. Prior to the receipt of ESSER funding, the District had one-to-one Chromebooks in place for grades 5-12. [1/26/22 N.T. at 10980 (Costello)]. With the use of ESSER funds, Wilkes-Barre now provides a Chromebook to every student in the district. Wilkes-Barre also used ESSER funds to upgrade its digital infrastructure, including routers and projectors. [1/26/22 N.T. at 10794-97 (Costello)].

1124. Beginning in 2019-20, the District set up a Committee to evaluate its textbooks and begin the process of replacing various textbook series. [1/26/22 N.T. at 10983-84 (Costello)]. With its ESSER funding, Wilkes-Barre has replaced or is in the process of replacing all of its textbooks in all of its core subjects. [1/26/22 N.T. at 10798 (Costello)].

1125. No evidence was presented that students in Wilkes-Barre lack other basic instrumentalities of learning, such as desks, chairs or supplies.

vi. Finances

1126. Between 2014-15 and 2019-20, Wilkes-Barre's total revenues increased from about \$104.7 million to about \$125.3 million. Over that same time period, its local revenues increased by about \$9.4 million, from approximately \$57.8 million to approximately \$67.2 million (16.3%), while its state revenue increased by about \$10.7 million, from about \$42.5 million to about \$53.2 million (about 25.1%). [LR-05078]. Thus, the percentage of total revenues received from the Commonwealth over this time period increased from 40.53% to 42.46%. [LR-05079].

1127. In the 2019-20 school year, Wilkes-Barre had revenues per ADM of \$15,727 and expenses per ADM of \$15,463.

1128. Between 2014-2015 and 2019-2020, Wilkes-Barre received an average \$1.3 million annual increase in Basic Education Funding. [1/25/22 N.T. at 10748 (Costello); PX-04891]. In the 2021-22 school year, Wilkes-Barre received an additional \$1.6 million as part of Level Up supplemental funding from the state. [1/25/22 N.T. at 10753 (Costello)].

1129. Wilkes-Barre has received or expects to receive approximately \$46 million in ESSER funding. The district plans to use the money for dual enrollment tuition, summer school, HVAC upgrades, roof replacements, additional books, and bringing back some of the teachers it had furloughed. [1/26/22 N.T. at 10873-74 (Costello)].

1130. In total, Wilkes-Barre received approximately \$49.1 million in COVID relief funding, including ESSER funds as well as other grants and financial supports. Approximately \$6 million of those funds have to be utilized to remedy learning loss, like providing summer schools, and other remedial instruction. [1/26/22 N.T. at 11062-64 (Costello); PX-04632].

1131. By consolidating its three high schools into one, Wilkes Barre was able to achieve four-and-a-half million in savings through the consolidation of programs and furloughing of redundant staff. Wilkes-Barre saved approximately \$600,000 by combining its sports teams. [1/25/22 N.T. at 10731; 1/26/22 N.T. at 11101 (Costello)].

1132. Wilkes-Barre's single biggest budget expense is salaries and benefits. [1/25/22 N.T. at 10746 (Costello)]. Although Wilkes-Barre had to furlough teachers to reduce expenditures starting in 2016, it hired back some of those furloughed teachers as retirements occurred or positions otherwise became available. Wilkes-Barre has also used ESSER funds to bring back some teachers who were furloughed as part of the high school consolidation. [1/26/22 N.T. at 11106-07 (Costello)].

1133. Wilkes-Barre is in significantly better financial position today than it was a few years ago. From 2015 to 2020, Wilkes-Barre was able to consistently increase its instructional expenses while also increasing its fund balance. [1/26/22 N.T. at 11041 (Costello); LR-01106, PX-04628].

1134. Wilkes-Barre currently has approximately \$20 million in its capital reserve fund. [1/25/22 N.T. at 10692 (Costello)]. Wilkes-Barre has approximately \$22-24 million in its capital improvement fund. [1/26/22 N.T. at 10996 (Costello)].

1135. Since the Petition was filed in this case, Wilkes-Barre's unassigned fund balance has consistently increased, going from \$ 917,283 as of June 30, 2015; to \$1.6 million as of June 30, 2016; to \$2.8 million as of June 30, 2017; to \$4.6 million as of June 30, 2018; to \$5.3 million as of June 30, 2019; to \$7.4 million as of June 30, 2020 [1/26/22 N.T. at 11030 (Costello); PX-03401-0016; PX-03402-0016; PX-03403-0016; PX-03404-0018; LR-01106-0008; PX-04628-0009].

1136. During this time period, Wilkes-Barre's credit rating was upgraded from negative to stable by Moody's. [1/26/22 N.T. at 11094 (Costello)].

1137. Even after assuming \$123 million in bond obligations in connection with the construction of the new high school, the amount that Wilkes-Barre spends on its debt service remains below the state average. [1/25/22 N.T. at 10731; 1/26/22 N.T. at 11000 (Costello); LR-01086-00006].

1138. Dr. Costello contended that the District was able to increase its fund balance only "through draconian measures." [1/26/22 N.T. at 11041(Costello)]. However, to the extent that the District has surplus funds, it is the decision of the Board and the Superintendent as to whether to save those funds or spend them - and, if spent, how to spend them. [Telesz Dep. at 13:15-22, 14:7-24]. School districts are not required to have any particular level of unassigned fund balance, nor a positive unassigned fund balance at all. [Hanft 7/7/20 Dep. at 32:7-19]. Therefore, had it had chosen to do so, the District could have spent more money on additional teachers, reading specialists, guidance counselors, social workers or other educational resources the District believes are lacking, rather than increasing its fund balance.

vii. Extracurricular Activities and Athletics

1139. Wilkes-Barre offers a variety of sports to its high school students, including football, soccer, field hockey, cross-country, wrestling, basketball, indoor track, lacrosse, softball baseball, track and field, and tennis. [1/26/22 N.T. at 10830-31 (Costello)].

1140. Wilkes-Barre offers a variety of other extracurricular activities, including at the high school level, band, chorus, outdoors club, speech and debate, chess club, math club, drama club, French club, Spanish club, German club, student newspaper and diversity clubs. [1/26/22 N.T. at 10836 (Costello); LR-02074-00052, 00053].

viii. Class Size

1141. In 2020-21, Wilkes-Barre's student-to-teacher ratio was 7.4 students per staff member and 16.2 students per classroom teacher. [LR-05069A-00006].

1142. Prior to the consolidation of its high schools, and according to data that Wilkes-Barre submitted to the Pennsylvania Auditor General, the district's high school class sizes were very low – approximately 15 students per class, including electives. In core subjects, the average class size ranged from 16 to 18 students per class. The classes at its new consolidated high school will have twenty-four or fewer students. [1/26/22 N.T. at 11127-31 (Costello); PX-03905].

1143. With regard to Wilkes-Barre's elementary schools, the testimony regarding class sizes is less clear as Dr. Costello identified a range of different class sizes during this testimony. For instance, at one point, Dr. Costello stated that Wilkes-Barre has recently been able to lower class sizes in its elementary schools to between 18 and 22 students per class. Dr. Costello also stated that Wilkes-Barre was "once again, approaching the mid-20s for [its] elementary schools." In another instance, Dr. Costello stated that, at certain grade levels, the district's strategy to low class sizes has worked and that there are "16 to 18 students" in an elementary classroom. But, at other grade levels, there are more students per classroom. [1/25/2022 N.T. at 10758-59 (Costello); 1/26/2022 N.T. at 10993-95, 11067-68 (Costello)]. In any event, the testimony from Wilkes Barre did not establish that the class sizes at Wilkes Barre are inappropriately large. Petitioners did not submit any class size data or documentary evidence related to class sizes in Wilkes Barre's elementary schools.

ix. Student Supports

1144. Wilkes-Barre offers a daily remediation period for its middle- and high-school students so that students can meet with teachers for extra help. [1/25/22 N.T. at 10769-70 (Costello)].

1145. Wilkes-Barre has five dedicated reading specialists, one at each elementary school. It also has one guidance counselor at each school except for the high school, which has four, totaling 11 guidance counselors in the district. [1/25/22 N.T. at 10762 (Costello)].

1146. Wilkes-Barre has four psychologists. Additionally, although Wilkes-Barre does not employ its own social workers, it contracts with the local Intermediate Unit to provide social work services. [1/25/22 N.T. at 10766 (Costello)].

1147. Wilkes-Barre has nine nurses and three truancy officers. [1/25/22 N.T. at 10767 (Costello)].

x. Pre-K

1148. Wilkes-Barre does not have its own district-funded pre-K program, but a private pre-K program called “Building Blocks” uses school facilities and receives state Head Start funding. [1/25/22 N.T. at 10769 (Costello)].

xi. Student Outcomes

1149. Wilkes-Barre measures students’ academic performance using coursework, PSSAs, Keystone exams, and growth formative and summative assessments. [1/26/22 N.T. at 10857 (Costello)].

1150. Despite Dr. Costello’s emphasis on Keystone assessments over growth scores at trial, Wilkes-Barre does not require students to be proficient or advanced on Keystone assessments to graduate from the district. [1/26/22 N.T. at 10911 (Costello)].

1151. Moreover, outside of Court, Dr. Costello has emphasized the importance of growth scores over assessment scores, writing in a 2020 message to Wilkes-Barre community members, “When you look at the growth, we see a different picture. The state growth average for English/Language Arts was 75. We had a growth score of 85. When looking at this together, although our proficiency is still lagging behind other Districts, we are showing growth. This will eventually lead to increased levels of proficiency. Our students will be gaining ground and not lagging or falling behind. We are making strides to achieve these State standards.” [1/26/22 N.T. at 10985 (Costello); LR-01086-00005 (emphasis added)].

1152. Similarly, as he told the community, with respect to the District’s academic growth “Looking at the Keystone Exams, Wilkes-Barre Area ranked first in Luzerne County. We ranked 14th out of 587 districts and charter schools. That is the top three percent for growth on Keystone literature assessments throughout Pennsylvania.” [1/26/22 N.T. at 10988 (Costello); LR-01086-00005].

1153. As Wilkes-Barre has noted publicly, “we excel in all Chapter 4 career benchmark standards” contained in the Future Ready Index. Dr. Costello agreed that this statement is accurate. [1/26/22 N.T. at 10988 (Costello); LR-01086-00005].

1154. In a June 29, 2020 School Board Meeting, a Wilkes-Barre board member noted that he advocates getting rid of Pennsylvania’s standardized assessments and noted: “89% of our graduating students go on to college, military and trade schools. That is a statistic that I am most proud.” [LR-01086-0014 (emphasis added); 1/26/22 N.T. at 10991 (Costello)].

F. William Penn School District

i. Background

1155. Petitioner William Penn School District (“William Penn”) is a school district located in Delaware County, with an Average Daily Membership of approximately 5,717

students in 2019-20 and a 2020-21 reported enrollment of approximately 4,800 students. William Penn has eight elementary schools, which serve students from kindergarten through sixth grade; a middle school for Grades 7 and 8; and a high school divided into two separate campuses, Penn Wood (Cypress Street) for Grade 9 and Penn Wood (Green Avenue) for Grades 10, 11, and 12. [Joint Stipulation of Facts at 11].

1156. William Penn presented the testimony of four witnesses: its current superintendent, Eric Becoats (“Dr. Becoats”) [01/10/2022 N.T. at 7417 (Becoats)]; its former superintendent, Jane Harbert (“Ms. Harbert”) [01/06/2022 N.T. at 6850 (Harbert)]; its athletic director, Raphal Curry (“Mr. Curry” [12/22/2021 N.T. at 6526 (Curry)]; and a kindergarten teacher, Nicole Miller (“Ms. Miller”) [12/22/2021 N.T. at 6659 (Miller)].

1157. About 87 percent of the William Penn student population is classified as black or African American. [01/10/2022 N.T. at 7486 (Becoats); PX-01992]. Approximately 3.5% of the students are classified as White, 4% as Hispanic, and 1% as Asian. [PX-04811].

1158. In 2017-18, 94.6% of William Penn students were classified as economically disadvantaged, which ranked 8th highest in the Commonwealth. [PX-04811]. As PDE data shows, in recent years approximately 5% of William Penn students were classified as English Language Learners, which is approximately 50th highest out of the Commonwealth’s 499 school districts. [PX-04811].

1159. As Ms. Harbert explained, the economic challenges in the area are apparent just by looking around the district because, for example, the houses in which her students live “reflect that [the district is] servicing a community with poverty.” [01/06/2022 N.T. at 6864 (Harbert)].

1160. Ms. Harbert stated that her “biggest concern” in “serving a district of poverty” is that the “students come in with the learning gaps.” [01/06/2022 N.T. at 6880 (Harbert)]. As a result, as Ms. Harbert explained, teachers within William Penn have to “try to and close that learning gap for the kindergarten students.” [01/06/2022 N.T. at 6913 (Harbert)]. Ms. Harbert estimated that 50% or more of the district’s students come in without the necessary skills to be ready for kindergarten. [01/06/2022 N.T. at 7048-49 (Harbert)].

1161. When asked to explain the genesis of students’ learning gaps, Ms. Harbert stated that part of the reason for learning gaps could be attributed to parents needing to work multiple jobs, daycare environments that do not focus on education, or students having disabilities. [01/07/2022 N.T. at 7268-69 (Harbert)].

1162. As PDE data shows, in 2018-19, only 73.76% of William Penn students regularly attended school. [LR-05080A-00013].

1163. Despite the hardships that exist in the communities served by William Penn, both Ms. Harbert and Dr. Becoats acknowledged the positives that occur within the school. For instance, on Monday, April 24, 2017, the meeting minutes from the Board of Directors meeting reflect that that Ms. Harbert, “described many highs and lows experienced this month. The low point was the perception that our schools are of poor quality.” She stated, “we need to tell the REAL William Penn story, not the one perceived by the press or test scores.” [01/07/2022 N.T. at 7344-47 (Harbert); LR-01948-00001] (capitalization in original). When asked at trial what the “REAL William Penn story” is, Ms. Harbert stated, “we bring students in, we care for our students, we give them great instruction, but we can’t give them everything they need.” [01/07/2022 N.T. at 7347-48 (Harbert); LR-01948-00001].

1164. Likewise, when discussing why he chose to take the superintendent position at William Penn, Dr. Becoats explained that he “felt as though by looking at some of the data that the school . . . that the District was right on the cusp of moving to that next level.” [01/10/2022 N.T. at 7420 (Becoats)].

1165. In an introductory letter when he started as superintendent, Dr. Becoats stated that he firmly believed that when the community works together, William Penn students can achieve at high levels both academically and socially. [01/10/2022 N.T. at 7516 (Becoats)].

1166. As Dr. Becoats agreed, high achievement is not just the responsibility of the school system; it takes the involvement of parents and others in the community. [01/10/2022 N.T. at 7516 (Becoats)].

ii. Academic Offerings/Curricula

1167. “The vision of the William Penn School District is to nurture and empower all students to become college and/or career ready. [William Penn’s] curriculum is one avenue through which this mission of nurturing lifelong learners is realized.” [01/10/2022 N.T. at 7561 (Becoats); LR-02329].

1168. As stated on William Penn’s website, the district’s curriculum is supported by the Pennsylvania’s standards aligned system, SAS, which includes standards assessments, a curriculum framework, best practices for instruction, materials and resources and planned interventions. [01/10/2022 N.T. at 7562 (Becoats); LR-02329].

1169. “To deliver the curriculum, [William Penn] insist[s] upon a dynamic approach to teaching and learning that fosters continuous improvement in order to be responsive to emerging and growing trends in teaching and learning. The curriculum is evaluated through the use of an instructional design cycle providing opportunities for administration and teaching staff

to review and revise each curricular area and assess its effectiveness on an ongoing basis.” [01/10/2022 N.T. at 7562-63 (Becoats); LR-02329].

1170. William Penn has a designated full-time position called the Supervisor of Curriculum Support for Math. The Supervisor of Curriculum Support for Math leads the instructional design process, provides professional development to all instructional facilitators and teachers, and supports school-based principals in implementing the math curriculum. [01/10/2022 N.T. at 7562-64 (Becoats); LR-02329-00002]. William Penn likewise has a full-time Supervisor of Curriculum Support for English who performs the same duties but for the ELA curriculum. [01/10/2022 N.T. at 7564 (Becoats); LR-02329-00002].

1171. In 2015, William Penn earned a place on the College Board’s 6th Annual AP Advanced Placement District Honor Roll. The “distinction is given to school districts in the U.S. for increasing access to AP coursework while simultaneously maintaining or increasing the number of students who earn scores of 3 or higher on AP Exams.” [01/06/2022 N.T. at 7087-88 (Harbert); LR-01480-00007]. While Ms. Harbert was superintendent, Penn Wood High School earned William Penn a place on the College Board’s Gaston Caperton Opportunity Honor Roll “for demonstrating significant and consistent growth in the number of students participating in advanced placement, taking the SAT exam, and applying to four or more colleges.” [01/06/2022 N.T. at 7090 (Harbert); LR-01481-00003].

1172. William Penn was the only school district in Pennsylvania that made both the 2015 Gaston Caperton and the 2015 AP District Honor Roll. [01/06/2022 N.T. at 7091 (Harbert); LR-01481-00003].

1173. As stated by William Penn, “[t]he best preparation for college requirements and college admission or career readiness is challenging coursework at the high school level.

Colleges look at the strength of classes completed and the students' performance in those classes.” At Penn Wood High School, in all core subject areas, students have the opportunity to enroll in advanced levels or AP classes. In addition, Penn Wood High School offers a variety of electives to enhance the student's academic record. [01/10/2022 N.T. at 7544-45 (Becoats); LR-01755-00003 (emphasis added)].

1174. To graduate from Penn Wood High School, William Penn requires students to obtain 22 credits, which must include 4 English credits, 3 math credits, 3 science credits, 3 social studies credits, 1/2 health credit, 1/2 physical education credit, 7 elective credits, a senior project, and participation in the Keystone exams. [01/06/2022 N.T. at 7058 (Harbert); LR-01502-00005, 00006].

1175. Ms. Harbert explained that William Penn encourages all college-bound students to consider taking a fourth year of math and science. [01/06/2022 N.T. at 7069 (Harbert); LR-01502-00005].

1176. The Penn Wood High School Course Selection Guide for 2018-2019 included the following advanced placement courses: AP English Literature and Composition, AP American History, AP Psychology, AP Calculus AB, AP Biology, AP Chemistry, AP Physics Mechanics C, AP Spanish Language, AP French Language, AP Studio Art, AP English Language and Composition, and AP Computer Science. [01/06/2022 N.T. at 7059-60 (Harbert); LR-01502-00008]. William Penn likewise offers classes in STEAM and STEM education. [01/06/2022 N.T. at 7022 (Harbert)].

1177. William Penn has a gifted program. The gifted program provides gifted education services to students who are identified as academically gifted. [01/06/2022 N.T. at 7061 (Harbert); LR-01502-00008].

1178. William Penn has a dual enrollment program. This program provides students with the opportunity to take enrichment courses and earn credit for both high school and college. [01/06/2022 N.T. at 7061-62 (Harbert); LR-01502-00007, 00008].

1179. William Penn continues to offer a dual enrollment program. [01/10/2022 N.T. at 7548-49 (Becoats); LR-01755-00012].

1180. Penn Wood High School provides most of its core academic courses at both the honors and college prep level, and offers a wide variety of elective courses. Its counselors and teachers assist in choosing the appropriate courses for each individual student. [LR-01502-00003].

1181. Regarding honor and college prep level classes, as Ms. Harbert stated, “college prep courses . . . give . . . some of the skills and knowledge [students] would need if they were planning to go on to college. Our honors program at the time was for students who knew they were going to college and wanted to advance themselves with more content and [] from a different perspective.” [01/06/2022 N.T. at 7067 (Harbert)].

1182. The Penn Wood High School Course Selection Guide for 2018-2019 included the following mathematics courses: Pre-Calculus Honors, Pre-Calculus, Calculus, Advanced Placement Calculus AB, Statistics, Trigonometry and Advanced Algebra, and Applied Mathematics. [01/06/2022 N.T. at 7064 (Harbert); LR-01502-00020 to 00022].

1183. William Penn’s “mathematics curriculum attempts to provide a continuous program of instruction which meets the needs of students in a changing society. The course offerings were prepared to provide students with opportunities to acquire the mathematical knowledge, skills, and modes of thought needed for daily life and effective citizenship, as well as to prepare students for post-secondary education and employment.” [01/06/2022 N.T. at 7065 (Harbert); LR-1502-00018].

1184. The Course Selection Guide listed the following required English courses, offered at both honors and college prep levels: English Composition, Literature, American Literature, and World Literature, [01/06/2022 N.T. at 7066-67 (Harbert); LR-01502-00016 to 00017].

1185. Penn Wood High School offered the following English elective courses from 2018-2019: Drama, SAT verbal prep, and Creative Writing. [01/06/2022 N.T. at 7068 (Harbert); LR-01502-00017 to 00018].

1186. The Course Selection Guide listed the following required science courses, offered at both honors and college prep levels: Environmental Science, Biology, and Chemistry. [01/06/2022 N.T. at 7068-69 (Harbert); LR-01502-00023 to 00024].

1187. Penn Wood High School offered the following science elective courses in 2018-2019: Physics, AP Physics, Anatomy/Physiology, Forensics, and Robotics. [01/06/2022 N.T. at 7070 (Harbert); LR-01502-00024, 00025].

1188. The Course Selection Guide described the Robotics course as “an introductory course in Robotics available for high school students. Students apply mathematical and problem-solving skills in real life situations by designing robots.” [01/06/2022 N.T. at 7070-71 (Harbert); LR-01502-00025].

1189. The Course Selection Guide listed the following required social studies courses: Law & Government, Global History, and American History. [01/06/2022 N.T. at 7071 (Harbert); LR-01502-00013].

1190. The Law & Government class description states that the course “aims to prepare students for the rights, responsibilities, and privileges of adult citizenship in the United States.” [01/06/2022 N.T. at 7071 (Harbert); LR-01502-00026].

1191. Penn Wood High School offered the following business elective courses from 2018-2019: Technology I, Technology II, Desktop Publishing, Macromedia Flash, Macromedia Fireworks, Web Page Design, Accounting I, Business Law, Entrepreneurship, On the Job Training, Cooperative Education, and AP Computer Science and Principles. [01/06/2022 N.T. at 7074 (Harbert); LR-01502-00033 to 00035].

1192. Penn Wood High School offered French and Spanish courses from introductory level through advanced placement, Spanish I through Spanish IV and French I through French IV. [01/06/2022 N.T. at 7074 (Harbert); LR-01502-00036 to 00037].

1193. All students in William Penn have the opportunity to participate in classes in physical education, art, music, and library at least one time per week. [01/06/2022 N.T. at 7134 (Harbert)].

1194. Penn Wood High School offered the following art elective courses from 2018-2019: Introduction to Drawing, Studio Portfolio I, Studio Portfolio II, AP Studio Art: Drawing, Independent Study in Drawing and Painting, Art Internship: Drawing, Ceramics I, Ceramics II, Independent Study in Ceramics, and Art Internship: Ceramics. [01/06/2022 N.T. at 7073 (Harbert); LR-01502-00029 to 00031].

1195. As stated by Ms. Harbert, William Penn's students were very successful in the district's art program. [01/06/2022 N.T. at 7073 (Harbert)].

1196. William Penn promotes arts, music, and special classes before the high school years. For instance, all fifth and sixth grade students in William Penn have the opportunity to participate in a band and to learn to play an instrument. [01/06/2022 N.T. at 7133-34 (Harbert)]. The middle school conducts an annual concert. [01/06/2022 N.T. at 7133 (Harbert)].

1197. During her time as superintendent of William Penn, William Penn added several elective courses, including Youth Court, Studio Portfolio III, Film Analysis, and Black Literature. [01/06/2022 N.T. at 7078-80 (Harbert); LR-01423-00008, 00012].

1198. In addition to academics, William Penn offers an advanced technology program that is designed to serve individuals who desire hands-on training and education for the acquisition or advancement of a technical career. [01/10/2022 N.T. at 7549 (Becoats); LR-01755-00012]. Dr. Becoats explained, the advanced technology program is “a way in which student have hands-on experience with an area that aligns with technology. This is something that we would provide or courses are designed to help students in areas like communication, computer application or applied science.” [01/10/2022 N.T. at 7549 (Becoats); LR-01755].

1199. Since he has been superintendent, Dr. Becoats is not aware of any courses that have been eliminated from William Penn’s course offerings. [01/10/2022 N.T. at 7550-51 (Becoats)].

iii. Teachers and Staff

1200. In 2020-21, William Penn had 522 reported professional and support personnel, comprised of 395 professional personnel (17 administrators and 316 classroom teachers) and 127 full-time support staff. [LR-05080A-00009].

1201. In the 2020-21 school year, the average classroom teacher at William Penn had 11 years of experience, 10.3 years of which were spent at William Penn. The average teacher salary was \$73,318.14. [LR-05080A-00006].

1202. In the 2020-21 school year, 304 out of 397 district professionals had a master’s degree or higher. In 2012-13, 279 out of 421 district professionals had a master’s degree or higher. [LR-05080A-00007].

1203. During the 2018-2019 school year, all of the Penn Wood High School courses in English, math, social studies, and science were taught by certified teachers. [01/06/2022 N.T. at 7059 (Harbert)]. All core courses required for graduation are taught by certified teachers. [01/10/2022 N.T. at 7551 (Becoats)].

1204. William Penn does performance evaluations of its teachers based on guidelines provided by the Commonwealth. For the 2018-2019 school year, all 326 teachers rated by the district were rated as satisfactory. 318 teachers were rated as “proficient” and 8 teachers were rated as “distinguished.” [01/10/2022 N.T. at 7579 (Becoats); LR-05080A-00007].

1205. As Ms. Harbert stated, William Penn does “a very good job” in making sure that teachers have professional development opportunities. The district provided many days of professional development, bringing in trainers and experts in different areas to give them knowledge to be better at their craft. [01/06/2022 N.T. at 6955 (Harbert)].

1206. Over a period of five days in the Fall of 2021, William Penn held “Fall Summit 2021,” which, as described by Dr. Becoats, was “the administration’s way of providing professional development to all school-based staff members.” Fall Summit 2021 was provided to all staff members, “about 400 individuals[,]” “to make sure that they were aware of the new curriculum [and] how to utilize it.” [01/10/2022 N.T. at 7571-72 (Becoats); LR-01902-00017 to 00019].

1207. Ms. Harbert explained that teachers’ skills “don’t decline.” Experienced teachers at William Penn “have those skills and [] know how to implement them.” [01/06/2022 N.T. at 6956 (Harbert)].

1208. The one William Penn teacher who testified at trial, Ms. Miller, herself graduated from William Penn and attended the same elementary school (Evans) where she taught.

She earned her bachelor's degree from Lincoln University and her master's degree from St. Joseph's University. She believes that William Penn prepared her well for undergraduate and graduate school programs. [12/22/2021 N.T. at 6660, 6707-08 (Miller)].

1209. Ms. Miller graduated at the top of her class from Lincoln University. [12/22/2021 N.T. at 6708 (Miller)].

1210. Despite disavowing the statements at trial, Ms. Miller acknowledged four times at her deposition that she believes William Penn provides an adequate education to its students. [12/22/2021 N.T. at 6723, 6709-10 (Miller)].

iv. Facilities

1211. As Ms. Harbert confirmed, at least as of August 2019, William Penn's facilities were not creating a safety or a danger issue for students. [01/07/2022 N.T. at 7170 (Harbert)].

1212. While Ms. Harbert was shown numerous pictures of the facilities at William Penn on direct examination, she testified that she believes the biggest issue the district has with its facilities are issues related to heating and cooling. At the time Ms. Harbert left as superintendent, four buildings in the district did not have air conditioning. [01/07/2022 N.T. at 7168 (Harbert)].

1213. As Dr. Becoats testified, ARP-ESSER dollars are being used to support facility needs within the district, primarily with the HVAC system. [01/10/2022 N.T. at 7629-30 (Becoats)]. The district expects ARP-ESSER dollars to total \$16,874,707. [LR-01904].

1214. In August 2019, William Penn had recently completed a project to put new roofs on several of its buildings. [01/07/2022 N.T. at 7171 (Harbert)].

1215. As Ms. Harbert explained, “most of the buildings” within William Penn are wheelchair accessible with the exception of one elementary school that does not have an elevator. [01/07/2022 N.T. at 7172 (Harbert)].

1216. Both campuses of the Penn Wood High School have a gymnasium and an auditorium. [01/07/2022 N.T. at 7172 (Harbert)].

1217. Penn Wood High School also has a football field, baseball field, and tennis courts. [01/07/2022 N.T. at 7172-73 (Harbert)].

1218. The middle school in William Penn has a gym and athletic fields. [01/07/2022 N.T. at 7173-74 (Harbert)].

1219. Two William Penn elementary schools have gymnasiums. [01/07/2022 N.T. at 7174 (Harbert)].

1220. Petitioners’ counsel showed William Penn’s Athletic Director, Mr. Curry, a picture of a weight room that was located in a non-functioning shower. However, Mr. Curry conceded that that space is no longer in use. On cross-examination, Mr. Curry further conceded that Penn Wood High School currently has a newer weight room that existed at the time the Petitioners’ photographed the shower room. However, the Petitioners did not show a picture of the new weight room to Mr. Curry. [12/22/2021 N.T. at 6616-20, 6643-45 (Curry); PX-04431].

1221. As explained, the photographer hired by Petitioners to take pictures of William Penn focused on taking pictures of “things that were detrimental to our students, either in their classrooms or outside of the facilities. So those were the pictures we took.” [01/07/2022 N.T. at 7395 (Harbert)].

1222. During trial, counsel for Legislative Respondents played nine videos that had been posted to William Penn’s website, each of which depicted one of William Penn’s school

buildings. These videos, which were also admitted into evidence, provided a more comprehensive view of William Penn’s facilities than the isolated photographs taken by Petitioners’ photographer for trial purposes and entered into evidence. When Ms. Harbert was shown this video footage, she could not identify anything as being in disrepair. [01/07/2022 N.T. at 7328, 7332-41 (Harbert); LR-03022, LR-03021, LR-03020, LR-03019, LR-03018, LR-03017, LR-03016, LR-03014, LR-03013].

v. Instrumentalities of Learning

1223. William Penn used its ESSER funds to purchase Chromebooks for all of its students. [01/10/2022 N.T. at 7508 (Becoats)]. The district considered whether it should buy Apple products but decided against it because Chromebooks are cheaper and had more adaptability with the curriculum that William Penn utilized. [01/10/2022 N.T. at 7509-10 (Becoats)].

1224. Prior to receiving ESSER funds, the available technology in William Penn’s elementary schools included “computer carts” which “house 30 Chromebooks.” At the middle school, there were “computer labs.” At the high school, there were “computer classrooms.” [01/06/2022 N.T. at 7038 (Harbert)].

1225. All of the classrooms in William Penn have a classroom set of textbooks. [01/07/2022 N.T. at 7175 (Harbert)].

1226. At the beginning of the 2019-20 school year, William Penn began the process of purchasing new curricula in ELA, math, and science, including the purchase of new textbooks and online supports at all grade levels. The ELA curriculum was updated through the district’s own budget in 2019, while the math and science curricula were updated through ESSER funding in 2020 and 2021. [01/10/2022 N.T. at 7566-70 (Becoats); LR-01902].

1227. In addition to new textbooks, William Penn has implemented a “social-emotional curriculum” at all grade levels. This helps students to understand their experiences outside of school. [01/10/2022 N.T. at 7520-21 (Becoats); LR-02330]⁹.

1228. All of the students in William Penn have a desk and a place to sit in class. [01/07/2022 N.T. at 7175-76 (Harbert)].

1229. No evidence was presented that students in William Penn lack other basic instrumentalities of learning, such as desks, chairs or supplies.

vi. Finances

1230. Between 2014-15 and 2019-20, William Penn’s total revenues increased from about \$87.5 million to about \$104.5 million. Over that same time period, its local revenues increased by about \$5.4 million, from approximately \$46 million to approximately \$51.4 million, while its state revenue increased by about \$9.9 million, from about \$38.1 million to about \$48 million. [LR-05078]. In 2019-20, the revenue per ADM was \$18,278.99 while the expenditures per ADM were \$17,921.22. [LR-05081].

1231. In the 1995-1996 school year, William Penn’s total revenue was \$42,617,713. 62.9 percent of William Penn’s revenue (\$26.8 million) came from local sources, and 34.8 percent (\$14.8 million) came from state sources. [01/07/2022 N.T. at 7231-34 (Harbert); LR-05082]. In the 2019-2020 school year, William Penn received a nearly equal proportion of its total revenue from state and local sources. \$51.4 million of William Penn’s revenue came from local sources (49.2%) and \$47.9 million came from state sources (45.8%). [01/07/2022 N.T. at 7231-34 (Harbert); LR-05082].

⁹ LR-2330 is misidentified as LR-2230 in the record. An unopposed Motion to Correct the Record on this point was filed with the Court on May 2, 2022.

1232. For the 2019-2020 school year, William Penn ranked No. 172 out of 499 districts in current expenditures per ADM at \$17,191.22. [01/07/2022 N.T. at 7235-36 (Harbert); PX-04894]. According to a summary exhibit prepared by Petitioners, even after attempting to weight William Penn's expenditures for need, it ranked No. 222 in the state in expenditures per ADM. [01/07/2022 N.T. at 7236 (Harbert); PX-04894].

1233. For the 2019-2020 school year, William Penn ranked 260th in Local Revenue per ADM at \$8,998.30 and 223rd in State Revenue per ADM at \$8,389.63. [PX-04896].

1234. As the Annual Financial Report for the Year Ended June 30, 2020 shows, the total revenues for William Penn in 2019-20 were \$104.2 million. The District's total expenditures for that year were \$100.9 million, resulting in an excess of revenues of \$3,381,008. [01/10/2022 N.T. at 7631-32 (Becoats); PX-04651-0019].

1235. William Penn's projected unassigned fund balance for the 2021-2022 school year is \$2.4 million. [01/10/2022 N.T. at 7496 (Becoats)]. The district's current fund balance was projected to increase by another \$1.3 million after the district's audit is complete, which would give it an unassigned fund balance of approximately \$3.7 million. [01/10/2022 N.T. at 7508 (Becoats)].

1236. In 2020-2021, the Basic Education Funding to William Penn was \$23,796,049. In 2021-2022, the estimated funding is set to increase to \$25,494,494, which represents an additional \$1,698,445 or 7.1 percent year-to-year increase in Basic Education Funding. [01/10/2022 N.T. at 7614 (Becoats); LR-01811-00004].

1237. William Penn expects to receive approximately \$27 million total in ESSER relief. In addition to those funds, the district expects to receive a \$2.8 million grant from CARES-Delco. [01/10/2022 N.T. at 7615 (Becoats); LR-01904]. As Dr. Becoats testified, William Penn

has “applied for grants and will continue to apply for grants . . . to continue to address the pandemic.” [01/10/2022 N.T. at 7426 (Becoats)].

1238. William Penn did not increase taxes for the current year in large part because the community was still experiencing COVID, and the district did not want to increase the burden on its residents. [01/10/2022 N.T. at 7641-42 (Becoats)].

vii. Extracurricular Activities and Athletics

1239. William Penn offers a wide-array of sports including football, soccer, tennis, volleyball, lacrosse, cheerleading, cross-country, basketball, wrestling, track and field, indoor track and field, softball, and baseball. [12/22/2021 N.T. at 6576 (Curry)]; [01/06/2022 N.T. at 7147 (Harbert); LR-01487].

1240. William Penn has had winning athletic programs and teams. For example, William Penn’s football team was co-champion of its league during the 2019-2020 school year. William Penn has won both a state and a district championship in basketball. [12/22/2021 N.T. at 6639, 6642-43 (Curry)].

1241. William Penn’s indoor track team competes at Lehigh University. [12/22/2021 N.T. at 6643 (Curry)].

1242. Track and field is often considered the district’s best sport. A William Penn graduate is currently the high jump champion of the Atlantic 10 conference. [12/22/2021 N.T. at 6643, 6651-53 (Curry)].

1243. Current Athletic Director Raphal Curry was a student athlete at William Penn. Mr. Curry attended William Penn from kindergarten through twelfth grade and said he had a “great experience” there. [12/22/2021 N.T. at 6529 (Curry)].

1244. Because of his athletic success in high school, Mr. Curry received a four-year scholarship to play basketball at St. Joseph’s University. [12/22/2021 N.T. at 6527; 6630-31

(Curry)]. As Mr. Curry acknowledged, his education as a student at William Penn helped him to achieve some of the success that he had in college. [12/22/2021 N.T. at 6632 (Curry)].

1245. Mr. Curry believes that, from an academic perspective, William Penn student athletes perform better while their sport is actively in season. Part of the reason for this belief is that Mr. Curry checks students' attendance records and grades during the season. Per the Pennsylvania Interscholastic Athletic Association ("PIAA") rules, schools must provide weekly reports on student athletes to make sure they are academically eligible to play. Mr. Curry does not review students' PSSA or Keystone scores. Likewise, he does not provide that information to the PIAA. [12/22/2021 N.T. at 6629-30 (Curry)].

1246. Many of Mr. Curry's students have obtained athletic scholarships to higher education institutions. Last year, twenty-four former William Penn students participated in athletics at Division I and Division II universities. Other former William Penn students play sports at Division III universities and junior colleges, but the district does not keep track of how many students participate in sports outside of Division I and II. [12/22/2021 N.T. at 6638-39 (Curry)].

1247. Aside from athletics, William Penn offered extracurricular activities in the creative arts, including concert band, a jazz band, a marching band, and a choir. These musical groups participated in a variety of concerts and performances as well as competitions. [01/06/2022 N.T. at 7130-32 (Harbert)].

1248. As highlighted in the agenda of the William Penn's Board of School Directors Business Meeting on March 27, 2017, "[u]nder the direction of art instructors . . . Penn Wood High School art students were inducted into the National Art Honor Society." Roughly 21 students were inducted into the Penn Wood Chapter of the National Art Honor Society. [01/06/2022 N.T. at 7135-36 (Harbert); LR-01482-00003].

1249. As Ms. Harbert described, there is an annual William Penn art show “where all the students from every art class was [sic] able to display their work, whether it was ceramics, whether it was drawings, penciled drawings, charcoal, sketches, perspectives, and the teachers worked very hard at that put many hours in. So the evening that we had the art show, you would go over, you would walk through the school and see some of the most amazing pieces of work that the students had completed in their art classes or in their internships. And some of them would occasionally put them for sale, but not very often, because they kept them for their portfolios.” [01/06/2022 N.T. at 7137-38 (Harbert)].

1250. Penn Wood High School put on a play and a musical every year that Ms. Harbert served as superintendent. [01/06/2022 N.T. at 7132-33 (Harbert)].

1251. The Penn Wood High School Speech and Debate Team competed in the Pennsylvania High School Speech League’s qualifying competition. One of the students achieved a first place win in the Humorous Interpretation category. Another student placed third in Oral Interpretation of Poetry, and another student placed third in Persuasive Speaking. [01/06/2022 N.T. at 7138-40 (Harbert); LR-01482-00005].

1252. William Penn provides students with the opportunity to participate in National Honor Society. [01/06/2022 N.T. at 7140 (Harbert)].

1253. Other extracurricular activities offered by William Penn include Newspaper, Science Olympiad, Yearbook, Speech Club, and Mock Trial. [01/06/2022 N.T. at 7147 (Harbert); LR-01487].

1254. William Penn offers extracurricular activities at its elementary schools, including fitness club, math club, drama club, debate club, newspaper, Ardmore Boys Run, and Girls on the Run. [01/06/2022 N.T. at 7143 (Harbert); LR-01487].

1255. As Ms. Harbert explained, unique extracurricular activities are provided at the William Penn elementary schools, including “Lego teams” which compete and do well in their competitions. [01/06/2022 N.T. at 7029 (Harbert)].

1256. As the Supplemental Compensation List for Staff Members in William Penn for the 2018-2019 school year indicates, approximately \$518,000 was paid in supplemental compensation to staff who took on roles in extracurricular and other after school activities. [01/06/2022 N.T. at 7142 (Harbert); LR-01487-00007].

viii. Class Size

1257. In 2020-21, William Penn had 9.1 students to every personnel member and 15.1 students per classroom teacher. In 2012-13, the district had 9.4 students per reported personnel and 15.9 students per classroom teacher. [LR-05080A-00009].

1258. The average class size for kindergarten in William Penn ranges from 15 students to 29 students. [01/07/2022 N.T. at 7176 (Harbert); PX-04647]. Ms. Miller testified that her typical class has around 25 students on average. [12/22/2021 N.T. at 6662 (Miller)].

1259. The differences in class size in different elementary schools within William Penn can be attributed to the number of students that fall within the boundaries of each neighborhood of each school. [01/07/2022 N.T. at 7178-79 (Harbert); Ex. 4647]. Ms. Harbert stressed that the district tries very hard to keep students in their own neighborhoods to encourage parent involvement. [01/07/2022 N.T. at 7178-79 (Harbert); PX-04647].

1260. William Penn sets the boundaries for each of its elementary schools. [01/07/2022 N.T. at 7179 (Harbert)]. The student to teacher ratio in each elementary school building can vary greatly year to year. [01/07/2022 N.T. at 7177 (Harbert)].

1261. In the summer of 2019, William Penn retained a consultant on demographics, enrollment projections, and building utilization scenarios to prepare a report on that topic. [01/07/2022 N.T. at 7179 (Harbert); LR-02015].

1262. In their report, the consultants found that half of the William Penn elementary schools were under 90 percent capacity, with Aldan Elementary at 84 percent, Bell Elementary at 86 percent, Park Lane Elementary at 81 percent, and Walnut Street at 64 percent. [01/07/2022 N.T. at 7188 (Harbert); LR-02015-00022].

1263. As a result of these findings, the consultants recommended that William Penn shift some of the student population to better utilize its buildings. [01/07/2022 N.T. at 7188 (Harbert); LR-02015-00022].

1264. Petitioners introduced some class size information from the 2019-20 school year into the record related to William Penn's elementary schools. According to the class size data introduced by Petitioners, as of January 9, 2020, the average class sizes at different elementary school grade levels ranged between 22.5 to 25.6 students. In particular, the average class sizes at different grade levels were approximately as follows:

- a. Kindergarten: 25.5
- b. Grade 1: 25.6
- c. Grade 2: 24.6
- d. Grade 3: 22.5
- e. Grade 4: 25.1
- f. Grade 5: 25.4
- g. Grade 6: 23

[PX-04647].

1265. Similarly, Petitioners introduced some class size information from the 2018-19 school year into the record. According to the class size data introduced by Petitioners, as of January 17, 2019, the average class sizes at different elementary school grade levels ranged between 22.9 to 26.4 students. In particular, the average class sizes at different grade levels were approximately as follows:

- a. Kindergarten: 25.5
- b. Grade 1: 26.4
- c. Grade 2: 24.7
- d. Grade 3: 22.9
- e. Grade 4: 26.2
- f. Grade 5: 25.1
- g. Grade 6: 24.8

[PX-04099-03].

ix. Student Supports

1266. William Penn provides a wide array of Student Services that fit outside the ambit of traditional classroom education. As Dr. Becoats explained, the Student Services are “coordinated programs of specialized services to students and families to ensure that all students have an equal opportunity to succeed at school.” Those services include counseling, nursing, providing social workers, providing crisis intervention and crisis management teams, homebound instruction, educational program and career guidance, immunization monitoring, medication dispensing, case management services with linkage to community agency resources, liaisons with Child and Youth Services, monitoring of attendance, safe school initiatives, services to homeless and foster students, and investigation and resolution of residency issues. [01/10/2022 N.T. at 7610-11 (Becoats); LR-02331-00001 to 00002].

1267. The Penn Wood High School Guidance Department provides academic, social and emotional support as well as career counseling to Penn Wood High School students. Each high school class is assigned to a specific guidance counselor for their four years of high school. [01/10/2022 N.T. at 7546 (Becoats); LR-01755-000070]. This program is offered at all schools and all grade levels at William Penn. [01/10/2022 N.T. at 7550 (Becoats)].

1268. There are many services provided by the Guidance Department at Penn Wood High School. These include, but are not limited to, individual and group counseling with students, career planning, course selection, orientation for new students, coordination of standardized testing program-- namely, SAT and ACT exams-- referral and coordination with community agencies, support and referral for special education service. In addition, the Guidance Department has conferences with students, parents and staff, including class coordination with district social workers and psychologists, orientation, selection and placement for career and technical schools, referral for home-bound services and student assistance program. [01/10/2022 N.T. at 7546-47 (Becoats); LR-01755-00007].

1269. William Penn has developed, and since expanded, an online cyber school platform that allows school choice for students who wish to attend a virtual school. The cyber program is currently called William Penn Personalized Learning Community, a name that the district adopted so that “families would understand it’s not about just offering a program. It is about trying to address the individual student need.” What this allows in practice, for instance, is that students have the opportunity to take certain classes through the Personalized Learning Community that might not otherwise be offered at the brick and mortar building. [01/10/2022 N.T. at 7574 - 76 (Becoats); LR-01902-21]. The district further contracts with a company called Edgenuity to purchase additional content for the Personalized Learning Community. [01/10/2022

N.T. at 7576 (Becoats)]. The Personalized Learning Community is supported by four teachers and an Executive Director who oversees the technology. [01/10/2022 N.T. at 7576 (Becoats)].

1270. Approximately 215 students participate in the Personalized Learning Community.. [01/10/2022 N.T. at 7576-77 (Becoats)].

1271. As part of William Penn curriculum upgrade, the district also implemented Intervention Tools, which are technological resources that provide students with additional supports that go hand-in-hand with the curriculum itself. For instance, with Intervention Tools, the district can assess whether a student is working on grade level and can adjust the material based on the student's current achievement level. These resources are available for Math, English, Science, and Social studies. [01/10/2022 N.T. at 7568 - 69 (Becoats); LR-01902-00005 to 00007].

1272. William Penn offers summer school classes and it intends to offer them again during the upcoming 2022 summer break. [01/10/2022 N.T. at 7546 (Becoats); LR-01470]. The summer classes, which the William Penn calls the "summer enrichment academy," allows students in grades K through 12 to "recover credits that they may not have been able to gain during the normal course of the year." Dr. Becoats noted that in earlier grades, the summer enrichment academy is able to provide a "very small student to teacher ratio . . . like 12 students to 1 teacher." [01/10/2022 N.T. at 7492-93 (Becoats)].

1273. As the 2021-2022 course selection guide for William Penn explains that "[e]very school in the District will employ the use of social and emotional learning strategies on a daily basis with students." [01/10/2022 N.T. at 7550 (Becoats); LR-01755].

1274. Using ESSER dollars, William Penn was able to put an academic counselor in every school. [01/10/2022 N.T. at 7461-62 (Becoats)]. Likewise, William Penn has one instructional facilitator in every one of its schools. [01/10/2022 N.T. at 7461-62 (Becoats)].

1275. William Penn also used ESSER money to put a mental health counselor in every school. [01/10/2022 N.T. at 7493(Becoats)].

1276. While Ms. Harbert was superintendent, the district employed four elementary counselors, two middle school counselors, and four high school counselors. [01/06/2022 N.T. at 6942-43 (Harbert)].

1277. While Ms. Harbert was superintendent, the district employed six school psychologists. [01/06/2022 N.T. at 6944 (Harbert)].

1278. While Ms. Harbert was superintendent, the district employed two social workers. [01/06/2022 N.T. at 6944 (Harbert)].

x. Pre-K

1279. There is an active pre-K provider located within the boundaries of William Penn that is considered a high-quality preschool program. [01/06/2022 N.T. at 6881-82 (Harbert)].

1280. In addition, the Delaware County Intermediate Unit operates a Head Start program. This program was formerly located in William Penn, but recently moved to a new facility when the former building closed. Attending the new facility is still an option for pre-K students living in the William Penn. The program is accessible via bus ride. [01/06/2022 N.T. at 6882 (Harbert)].

xi. Student Outcomes

1281. At trial, William Penn (like the other Petitioner school districts) placed a significant amount of emphasis on its students' below-average scores on state assessments to support its position that the district is not offering an adequate education.

1282. By contrast, William Penn's strategic plan states: "We realize that a student's success is measured by much more than a test score[.]" a sentiment with which Dr. Becoats agreed. [01/10/2022 N.T. at 7532 (Becoats); LR-1470-0010].

1283. Likewise, on June 8, 2017, Ms. Harbert sent a letter to the residents of William Penn School District discussing mandated expenses. In the letter, she states “**resources are being pulled away from educating students** . . . Some of the mandates that the state has given school districts within the past 7 years include ✓ Implementation of New State Standards and State Assessments ✓ Increased Graduation Requirements (Keystones),” strongly suggesting her belief as then-superintendent that standardized tests actually pull resources away from students. [01/07/2022 N.T. at 7194-95 (Harbert); PX-04101] (emphasis in original).

1284. Despite Ms. Harbert’s contention at trial that she believes that PSSA and Keystone scores produce “reliable data that we can use to determine whether students are truly proficient and have learned the skills and the standards that they need to be successful,” William Penn has not implemented the Keystones as a graduation requirement. [01/06/2022 N.T. at 7096 (Harbert); 01/07/2022 N.T. at 7196 (Harbert); PX-03012; PX-04101].

1285. As Dr. Becoats agreed, William Penn provides its students with opportunities and opportunities are different from educational outcomes. [01/10/2022 N.T. at 7524-25 (Becoats)].

1286. Mrs. Miller testified that some of the factors she believes should be used in order to determine how good of a job a school is doing are student growth, teacher observations, and curriculum data. [12/22/2021 N.T. at 6712 (Miller)].

1287. Many William Penn schools have shown positive PVAAS growth scores. For instance, as noted in the 2019-20 Future Ready Index, Walnut Street Elementary School had an academic growth score of 100, which exceeded both the statewide average growth score and the statewide growth standard. For mathematics, the average growth score was 87, which

exceeded the statewide average growth score of 75.3 and the statewide growth standard of 70. [01/10/2022 N.T. at 7580-81 (Becoats); PX-03018-00002].

1288. As indicated on the 2019-20 PA Future Ready Index, Bell Avenue Elementary School had an academic growth score of 100 for ELA and 98 for math/algebra. [01/10/2022 N.T. at 7582 (Becoats); PX-03004-00002].

1289. Penn Wood High School had an academic growth score of 81 for ELA and an academic growth score of 100 for math. [01/10/2022 N.T. at 7583 (Becoats); PX-03012-00002].

1290. While Ms. Harbert questioned the reliability of the PVAAS system at trial, when she was superintendent of the district, she used to celebrate teachers who had positive growth scores. [LR-01443; 01/06/2022 N.T. at 7095-96 (Harbert)].

1291. As Dr. Becoats acknowledged when asked about out-of-school factors including person, family, or economic circumstances, “[t]here are some factors that can impact a student’s performance.” [01/10/2022 N.T. at 7605-06 (Becoats)].

1292. William Penn publishes a resource guide for families because, as Dr. Becoats explained, “based upon [] diagnostic tools, some [] students are below and not performing where we would want them to perform educationally, and that’s where we would begin to address their needs.” The resources guide includes topics such as: Abuse and Neglect, bereavement groups, Child Care Services, Food and Clothing Resources, Housing Assistance, and Mental Health Organizations. [01/10/2022 N.T. at 7606-07, 7610 (Becoats); LR-02082-00002, 00003].

1293. As Dr. Becoats agreed, there are students who graduate from William Penn who go on to become successful at college and successful at a career. [01/10/2022 N.T. at 7525 (Becoats)]. As stated in the William Penn “Fast Facts 2021,” a document that was prepared while

Dr. Becoats was superintendent, 63% of students at William Penn transition to college while 4% transition to the military and 13% transition to the workforce. [01/10/2022 N.T. at 7519-20 (Becoats); LR-2330].

1294. During the 2018-2019 school year, a total of 124 William Penn graduates indicated an intent to attend a 4-year college: 22 students indicated an intent to attend a 4-year college or university not in Pennsylvania; 71 students indicated an intent to attend a private 4-year college or university in Pennsylvania; and 31 students indicated an intent to attend a state university in Pennsylvania. [01/06/2022 N.T. at 7125 (Harbert); LR-01183-00004].

1295. Additionally, during the 2018-2019 school year, 101 William Penn graduates indicated an intent to attend a 2-year college. Combined with the 124 students who intended to attend a 4-year college, a total of 225 out of 329 graduates from William Penn School District for 2018-2019 intended to enroll in college. [01/06/2022 N.T. at 7126 (Harbert); LR-01183-00004].

1296. During the 2017-2018 school year, William Penn had a total of 329 high school graduates and 43 total dropouts. The most common reason given for dropping out was disliking school. [01/06/2022 N.T. at 7121 (Harbert); LR-01183-00003 to 00004].

G. School District Petitioners Summary Findings

1297. The Court finds that the evidence presented with respect to the Petitioner Districts does not support a finding that Respondents have violated the Education Clause or the Equal Protection Clause of the Pennsylvania Constitution.

1298. District officials identified a number of areas where they believe more opportunities could have been provided, or better results could have been obtained, if the District had additional resources. [*See, e.g.*, 1/26/22 N.T. at 10870 (Costello) (“We need additional resources to provide reading specialists, guidance counselors, the additional teachers for small

group instruction”); *id.* at 10903 (“So although we do provide professional development, it’s not nearly what I would anticipate or like it to be”); *id.* at 10879 - 80 (When informed that Petitioner Expert Dr. Kelly concluded that Wilkes-Barre had a \$33 million annual shortfall from the Commonwealth, Dr. Costello stated, “33 million would be a really good start.”); *see also* 12/16/21 N.T. at 5126 (Rau) (testifying that although Lancaster offers an Introduction to Engineering course, it does not have the resources to teach more advanced levels of engineering in house); *id.* at 5142-43 (When asked how a lack of resources constrain Lancaster’s athletic programs Dr. Rau stated, “[o]ur coaches are predominantly our teachers who – who volunteer to do this job. We pay them, of course, but they volunteer to be the coach. And so we are not getting the coaches like Penn State, right? The big athletic director of Penn State who makes what, \$70 million in four years, or something like that. I notice those things because our kids aren't getting that.”); 12/8/21 N.T. at 3795-96 (Waite) (Agreeing that the district does provide opportunities for its students, but if it had more resources, it could provide better opportunities)].

1299. However, the desire of school district administrators to offer additional resources, programs, or interventions to their students does not establish that the instruction that is being provided is unconstitutional. The Education Clause does not require that school districts must be provided with sufficient funding to obtain every resource that might benefit students.

1300. Furthermore, for the reasons discussed elsewhere in these findings of fact and conclusions of law, the Court finds that constitutional compliance must be measured primarily by the opportunities made available to students, and not by disparities in student outcomes between and among districts.

1301. The Court finds that the Petitioner Districts provide students with an opportunity to obtain a standard education that includes instruction in core subject matter areas,

by sufficiently trained teachers, in safe and appropriate facilities, and with basic instrumentalities needed in order to teach students.

1302. The Court further finds that a number of factors outside of standardized achievement test results, such as student grades, teacher evaluations, graduation rates, and post-secondary transition data, indicate that the instruction provided by the Petitioner Districts is sufficient to allow a substantial majority of the districts' students to take advantage of the educational opportunities being provided.

VII. TESTIMONY REGARDING NON-PETITIONER SCHOOL DISTRICTS

1303. In addition to the testimony about Petitioner Districts, the Court also heard the testimony of witnesses representing three other school districts: SDP, Otto-Eldred School District ("Otto-Eldred") and the School District of Springfield Township ("Springfield Township"). Additionally, some witnesses provided passing testimony about other school districts in which they formerly worked, or for which they had gained general knowledge.

A. School District of Philadelphia¹⁰

i. The Unique Nature of the School District of Philadelphia

1304. Based on student enrollment, SDP, which encompasses the entire City of Philadelphia, is the largest school district in Pennsylvania by a wide margin and, in fact, the tenth largest school district in the United States. [1/11/22 N.T. at 7707 (Hite); LR-03351-00011].

1305. In the 2020-2021 school year, there were 203,463 total students in Philadelphia. This includes 124,111 students attending SDP and 79,352 students attending charter schools. [LR-03297-00001].

¹⁰ Pursuant to the stipulation placed on the record during Dr. Hite's testimony [1/11/22 N.T. at 7925-26], and excepting this footnote, this section of the Proposed Findings of Fact and any other portions relating to evidence presented by SDP has been prepared solely by counsel for Senator Corman.

1306. In Philadelphia, 39% of students attend charter schools and 61% of students attend SDP. The number of Philadelphia students who are enrolled in charter schools alone is nearly four times the size of the next largest school district in Pennsylvania – Pittsburgh School District. [1/24/22 N.T. at 10319 (Monson)].

1307. SDP has about 80 authorized brick-and-mortar charter schools. Approximately 10% of SDP students attend state-authorized cyber charter schools. [1/11/22 N.T. at 7743-44 (Hite)].

1308. The number of charter school students in Philadelphia City makes the city a national leader in providing meaningful school choice to students and parents. [1/24/22 N.T. at 10320 (Monson)]. There are high-quality charter schools in Philadelphia. [1/24/22 N.T. at 10320 (Monson)].

1309. Unlike the boards of directors for other school districts in Pennsylvania, SDP's school board has no taxing authority. SDP relies on whatever local taxes the City of Philadelphia chooses to impose and collect on its behalf, in addition to state and federal sources of funding. [1/11/22 N.T. at 7755 (Hite); 1/24/22 N.T. at 10189-90 (Monson)].

1310. In December 2001, the Pennsylvania Secretary of Education declared SDP to be financially distressed, and placed the district under the control of a five-member School Reform Commission ("SRC").

1311. The SRC continued to control SDP until June 2018, when it voted to return the district back to local control. [LR-03351-00012]. Since the time of its formation, the SRC helped to improve the quality of education and the fiscal stability of SDP. [LR-03360-00124].

1312. SDP now has an investment-grade credit rating, which results in significant savings on its bond issues and on its tax and revenue anticipation notes, as indicated in findings below. [1/24/22 N.T. at 10330-31 (Monson); LR-03351-00013].

ii. Background

1313. Dr. William Hite is the superintendent of SDP. He has served in that role for 10 years. [1/11/22 N.T. at 7701 (Hite)].

1314. Uri Monson is the chief financial officer (CFO) of SDP. He has served in that role for approximately six years. As SDP's CFO, he is responsible for budgeting, treasury, accounting, payroll, risk management, procurement, and all other financial operations in the district. [1/24/22 N.T. at 10178-79 (Monson)].

1315. As of the 2019-20 school year, 65.14% of SDP students were classified as economically disadvantaged. [1/11/22 N.T. at 7712 (Hite); PX-04813-0001].

1316. Unstable home lives disadvantage children and create educational readiness gaps. [1/13/22 N.T. at 8209 (Hite)].

1317. As of the 2019-20 school year, the percentage of SDP students who were classified as special education students was approximately 2.4% lower than the statewide average. [1/13/22 N.T. at 8043 (Hite); PD-00012-0004].

1318. As of the 2019-20 school year, English-language learners comprised 12.76% of SDP's student body. [1/11/22 N.T. at 7718 (Hite); PX-04813-00001; PX-04816-00001]. SDP students hail from more than 150 countries and speak more than 100 languages. [1/11/22 N.T. at 7718 (Hite)].

1319. As of the 2019-20 school year, SDP's student body had a racial makeup of 48.29% Black, 22.66% Hispanic, 14.7% White, and 9% Asian. [1/11/22 N.T. at 7711-12 (Hite); PX-04813; PX-02098, "LEA and Race" Tab, Rows 3737-43].

1320. SDP has an in-house Office of Research and Evaluation, through which it employs psychometricians, researchers, and evaluators who look at school data and analyze its progress toward its district-wide goals. That office also performs research related to improvement strategies that the district identifies for analysis. [1/11/22 N.T. at 7724 (Hite)].

1321. SDP has a Charter School Office, which authorizes and monitors charter schools. [1/11/22 N.T. at 7741-42 (Hite)].

1322. SDP has instituted special assistance programming and funding for its lowest-performing schools, called the “Acceleration Network,” formerly known as the “Turnaround Network.” SDP provides the 22 schools in the Acceleration Network with academic coaches in math, English language arts, and literature, along with an additional administrator, an additional counselor, a data manager, and a school climate specialist. [1/11/22 N.T. at 7902 (Hite)].

1323. In the 2018-19 school year, 75.53% of SDP students regularly attended school. [LR-05043A-00009]. In other words, 24.47% of SDP students were habitually absent.

iii. Academic Offerings/Curricula

1324. SDP has developed an instructional plan that is designed to help students reach the achievement goals that its school board has set. The plan starts with aligning curricular materials and lesson plans to Pennsylvania Common Core standards. [LR-03147-00008]. The plan also includes instructional guides that outline a 3-step lesson architecture: (1) preparing students to learn, (2) interacting with the concepts, and (3) extending students’ understanding. [LR-03147-00017].

1325. SDP offers students in its high schools 35 rigorous courses and programs, including AP courses, international baccalaureate (“IB”) diploma programs, and dual enrollment programs through which students can take college courses and earn college credits while they are still in high school. [1/11/22 N.T. at 7953-54 (Hite); LR-03124-00001].

1326. In 2015, SDP implemented a strategic vision called “Action Plan 3.0,” which outlined various actions that it would take to improve its schools. SDP carried out Action Plan 3.0 until around January 2021, when the district shifted to a new set of goals that its school board adopted. [1/13/22 N.T. at 8091-93 (Hite)]. Under Action Plan 3.0, more than 6,700 students enrolled in AP and dual enrollment courses through which they could earn college credits. [1/13/22 N.T. at 8102 (Hite); LR-03127].

1327. SDP has five Career and Technical Education (“CTE”) schools. Additionally, SDP has a subset of high schools where CTE courses are offered. [1/11/22 N.T. at 7890 (Hite)].

1328. SDP offers programs in more than 40 occupational areas, including:

- a. Business & Finance: accounting and financial services; business administration; and sports marketing and management;
- b. Communications & Graphics: digital medial production; film & video production; and graphic design;
- c. Construction & Manufacturing: architectural drafting; carpentry; computer aided drafting and design; construction technologies; electrical & power transmission installation; electromechanical/mechatronics; electronics technology/automated systems; engineering technologies; facility & property maintenance; plumbing technology; precision machine tool technology; welding technology;
- d. Early Childhood Education & Childcare;
- e. Health: dental assisting; emergency medical technician/fire academy; health related records technology; health related technologies; medical/clinical assistant;
- f. Hospitality: baking and pastry arts; culinary arts;

- g. Information Technology: computer supports systems technology; computer systems networking; web design; engineering technologies;
- h. Natural Sciences & Biotechnology: agriculture, food and natural resources; animal sciences; biotechnology; food processing sciences; horticulture; natural resources management; solar energy;
- i. Personal Care: barbering; cosmetology; fashion design; and
- j. Transportation: auto body collision repair; automotive technology; logistics, materials & supply chain management.

[1/13/22 N.T. at 8135 (Hite); LR-03144].

1329. As enrollees in one of the district's CTE programs, students begin their coursework in 10th grade and receive 1,080 hours of specific instruction, involving state-of-the-art equipment, and under the supervision of experienced industry professionals who are trained to teach students in the classroom. [1/13/22 N.T. at 8135 (Hite); LR-03144-00001].

1330. SDP provides all of its high school students with free access to PSAT and SAT practice tests and individualized college preparatory tools. For example, if a SDP student scores low on a PSAT in a certain subject area, the district enrolls the student in sessions with Kahn Academy for additional instruction in that subject area. [1/11/22 N.T. at 7954-55 (Hite); LR-03124-00001].

1331. To date, the U.S. Department of Education has recognized a total of 30 SDP schools as National Blue Ribbon Schools. Schools receive National Blue Ribbon recognition for two reasons: (1) high academic performance over a period of time and (2) success in closing achievement gaps among student groups. In 2018, Albert M. Greenfield and William M. Meredith

elementary schools were two of only 19 schools in Pennsylvania to receive National Blue Ribbon recognition. [1/11/22 N.T. at 7964-65 (Hite); LR-03124-00002].

1332. Some SDP schools have academic criteria for admission, e.g., Julia R. Masterman Elementary and High School, both of which have superior scores on standard tests. SDP does not provide increased funding to Masterman to achieve these results. [1/11/22 N.T. at 7945-47 (Hite)].

1333. The Fox Chase Cancer Center offers select SDP high school students an opportunity to participate in the Teen Research Internship Program (TRIP) Initiative – an intensive 14-week science exploratory program that it offers free of cost. [LR-03141-00001].

1334. SDP offers students a range of options for school types and settings, including 22 themed magnet schools, virtual schools, and nine specialty programs, including creative and performing arts, criminal justice, international affairs, human services, and the Peace Academy. [1/11/22 N.T. at 7956-57 (Hite); LR-03124-00001].

1335. SDP is the only district in Pennsylvania to offer a “middle college” program. Through this program, students are enrolled in the Community College of Philadelphia and their high schools at the same time so that, after four years, they have earned both a high school diploma and an associate’s degree in general studies. Students who complete this program generally go on to attend a four-year college or university. [1/11/22 N.T. at 7957-58 (Hite); LR-03124-00001].

1336. SDP operates an in-house cyber school with drop-in centers where students who attend the school can get in-person assistance from certified teachers. [1/13/22 N.T. at 8045-46 (Hite)]

1337. SDP provides a comprehensive range of mandated educational services which include general, special, International Baccalaureate, advanced placements, and vocational

education programs, at the elementary and secondary levels, as well as related support and transportation services. [LR-03351-00012].

1338. The overall quality of education in SDP's schools was steadily improving each year up to the point of COVID-19 pandemic shutdown because the district instituted reforms that provide for fiscal stability, educational improvement and operational control. [LR-03351-00012].

iv. Teachers and Staff

1339. In the 2020-21 school year, SDP reported 10,113 professional personnel, including 415 administrators and 8,438 classroom teachers. Additionally, SDP reported 7,694 full-time support staff and 1,178 part-time support staff. [LR-05043A-00006]. In total, SDP reported having 18,985 full and part-time personnel.

1340. In the 2020-21 school year, SDP had a ratio of 14.7 students per classroom teacher and 6.5 students per reported personnel. By comparison, beforehand, in each year since the 2012-13 school year, SDP's ratio of students to classroom teachers was 15.6 or higher, and its ratio of students to reported personnel was 6.9 or higher. [LR-05043A-00007].

1341. In the 2018-19 school year, SDP rated 7,946 teachers. Of those teachers, 7,911 of them were rated as satisfactory (99.6%), including 7,019 who were rated proficient and 718 who were rated distinguished. [LR-05043A-00002].

1342. As of the 2020-21 school year, SDP's average classroom teacher had 13.3 years of overall experience and had been teaching in SDP for an average of 13.3 years. [LR-05043A-00005].

1343. As of 2018, SDP paid its teachers, on average, a salary of \$70,200. That was about \$3,000 more than the average teacher salary in Pennsylvania, and \$9,700 more than the average salary for teachers nationally. [LR-03360-00258].

1344. In the 2020-21 school year, the average SDP teacher received a salary of \$73,138.22. [LR-05043A-00005].

1345. For the current school year (2021-22), SDP anticipates spending an average of \$75,800 per teacher on salary, plus an equivalent of \$50,200 per teacher on benefits. [PX-03043-0040].

1346. Under their current contract with the district, SDP's teachers will receive, on average, a 9% raise over the next three years. [1/24/22 N.T. at 10345 (Monson)].

1347. As of 2018, SDP had trained each of its teachers for kindergarten through 3rd grade to be expert reading instructors. [1/11/22 N.T. at 7949 (Hite); LR-03124-00001].

1348. SDP trains its staff on data analysis and specific protocols for improving educational outcomes. The training takes place over 10 days in the summer, and the district pays its staff members, on top of their regular salaries, to attend the training. [1/11/22 N.T. at 7927-28 (Hite)].

1349. In its budget for the current school year (2021-22), SDP allocated \$7.5 million to professional development. [PX-03074-0024].

1350. By the start of the 2018-19 school year, SDP had hired additional teachers and filled 99% of all of its teacher vacancies. [LR-03351-00014].

v. Facilities

1351. SDP manages more than 300 buildings, including 220 schools, as well as warehouses, garages, and other properties. [1/24/22 N.T. at 10182 (Monson)].

1352. SDP develops Capital Improvement Plans in five-year increments but updates each plan yearly to account for new maintenance requests or work orders. [1/11/22 N.T. at 7999-8000 (Hite); LR-03186].

1353. SDP is currently undertaking more than \$224 million worth of work on construction and repair projects in its schools. [1/11/22 N.T. at 7998 (Hite)].

1354. As of the 2018-19 school year, SDP had invested \$50 million in early literacy classroom modernization. [1/13/22 N.T. at 8115 (Hite); LR-03130-00002].

1355. As of the 2018-19 school year, SDP had invested \$8 million to repaint more than 824,000 square feet of space. [1/13/22 N.T. at 8115 (Hite); LR-03130-00002].

1356. During pandemic-related school closures, SDP completed approximately \$250 million in facility improvements, including increasing the number of its lead-safe schools, removing approximately five acres of asbestos, and modernizing early literacy classrooms. [1/24/22 N.T. at 10354 (Monson); PX-03074-0017].

1357. In the 2018-19 fiscal year, SDP allocated \$3,310,750 toward design costs to renovate athletic fields, fieldhouses, or gyms at John Bartram High School. [LR-03186-00005].

1358. In the 2018-19 fiscal year, SDP allocated \$175,691 toward planning for renovations of the Olney High School athletic field. [LR-03186-00020].

1359. In the 2017-18 fiscal year, SDP allocated \$1,068,184 to complete renovations of athletic fields, fieldhouses, or gyms at Northeast High School. [LR-03186-00021].

vi. Instrumentalities of Learning

1360. As of the 2018-19 school year, SDP had invested \$45 million in classroom technology and delivered more than 20,000 Chromebooks to schools. [1/13/22 N.T. at 8114 (Hite); LR-03130-00002].

1361. SDP has purchased and distributed Chromebooks to each of its students. It has also established three drop-in locations where students can bring their Chromebooks that are in need of repair or replacement. [1/11/22 N.T. at 7857-59 (Hite); 1/13/22 N.T. at 8054-56 (Hite)].

1362. SDP has achieved a one-to-one Chromebook ratio for all of its students. In addition, through a joint venture between SDP, the City of Philadelphia, charter schools in the city, and some private funders, SDP has provided over 7,000 home internet connections to students. [1/24/22 N.T. at 10352-53 (Monson); PX-03074-0017]. Prior to the COVID-19 pandemic school closures, SDP students who met certain criteria could obtain free internet service. [1/24/22 N.T. at 10353-54 (Monson)].

1363. As of 2018, all of SDP's kindergarten through 3rd grade classrooms had reading libraries that included books at multiple reading levels to assist students as they learned to read. [1/11/22 N.T. at 7949-50 (Hite); LR-03124-00001].

1364. Under Action Plan 3.0, SDP distributed 1,000,000 new books to classrooms for kindergarten through 3rd grade. [1/13/22 N.T. at 8104-05; LR-03128-00001].

vii. Finances

1365. SDP's current and short-term financial position is strong. [1/24/22 N.T. at 10355 (Monson); PX-03074-018].

1366. For the current school year (2021-22), SDP's budgeted revenues are \$4,020,800,000. Its budgeted expenditures are \$3,911,143,000. The district projects to have a \$169,907,000 ending fund balance. In addition, the district projects to have an operating surplus of \$108,836,000 during the current year. [PX-03074-018].

1367. As part of its current budget, however, SDP projected that its basic education subsidy from the Commonwealth would remain flat from the 2020-21 fiscal year to the 2021-22 fiscal year. SDP's CFO, Mr. Uri Monson, acknowledges that projection was inaccurate and SDP received additional basic education funding to SDP's revenue. [1/24/22 N.T. at 10358-59 (Monson); PX-03074-0022].

1368. As part of its budget, SDP projected to receive \$1,096,000,000 in basic education funding from the Commonwealth. [LR-03354-00007]. However, the SDP is actually projected to receive an estimated \$1,224,128,965 in basic education funding from the Commonwealth. This is an increase of approximately \$128 million more than what SDP projected to receive in basic education funding in its budget. [1/24/22 N.T. at 10363 (Monson); LR-04234, “2021-22 est BEF June2021” tab, Row 400].

1369. Mr. Monson acknowledged that SDP had likely underestimated how much it would receive in special education funding during the current fiscal year (2021-22) as well. [1/24/22 N.T. at 10365 (Monson)]. He was correct. SDP projected to receive \$154 million in special education funding. However, according to the estimated special education funding documents from PDE, SDP is projected to receive \$162,259,354 in special education funding. [LR-03354-00007; LR-04236, “2021-22 est SEF June 2021”, Row 400].

1370. In total, accounting for only basic education funding and special education funding, SDP is estimated to receive about an additional \$136.4 million from the Commonwealth during the current fiscal year (2021-22) than the district initially expected.

1371. In the most recent budget that it enacted (2021-22), the General Assembly established that, relative to prior years, SDP will receive an additional \$39 million as its baseline, “hold harmless” amount of Basic Education Funding. [1/13/22 N.T. at 8196 (Hite)]. This increased baseline will be used in future allocations under Act 35 of 2016.

1372. In the 2019-20 school year, SDP’s revenue per average daily membership was \$19,442.89. [PX-02135, “2019-20 Rev per ADM” Tab, Line 400].

1373. In its budget for the current school year (2021-22), SDP allocated \$15 million for social and emotional supports in its schools. [PX-3074-0023].

1374. In its budget for the current school year (2021-22), SDP increased its discretionary funding by more than \$9 million across all of its schools. Depending on their classification by SDP, schools are allocated either \$175 or \$275 per student. Schools can use the discretionary funds for staff, supplies, textbooks, computers, extra-curricular activities, and parent outreach, and other purposes. [PX-03043-0005, 0007].

1375. District-wide, in its budget for the current school year (2021-22), SDP allocated \$525,071,609 for non-instructional expenditures, which is an increase of nearly 5% over the prior year. [PX-03074-0120].

1376. In its budget for the current school year (2021-22), SDP allocated \$1,445,830 to salaries for research and evaluation positions, such as data analysts, researchers, and statisticians. [PX-03074-0294].

1377. Since 2012, SDP has experienced multiple credit upgrades, allowing it to borrow money at lower interest rates. As of June 2020, for the first time since 1977, Moody's Investor Services upgraded SDP to an "investment grade" credit rating. [1/24/22 N.T. at 10330-31 (Monson); LR-03351-00013]. Moody's described SDP's strengths as "stable charter enrollment for the past three years; structural balance and operating surpluses for the past three years; experienced management that brings control of finances and detailed management of daily school operations; and the City's willingness to support the School District with permanent new dedicated tax revenue and an increased governance link between the City and the District." [1/24/22 N.T. at 10342 (Monson); LR-03360].

1378. In 2019, Fitch also upgraded SDP's credit rating to BB+ and maintained the district's outlook as stable. [1/24/22 N.T. at 10334 (Monson); LR-03351-00015].

1379. For fiscal year 2020, SDP maintained a positive budgetary operating fund balance of \$172.8 million. SDP attributed this occurrence to “increased state and local funding, a strong financial focus resulting in more favorable financing terms and smarter fiscal management.” [1/24/22 N.T. at 10332 (Monson); LR-03351-00015].

1380. During Dr. Hite’s tenure as superintendent, SDP has saved approximately \$15 million annually from having closed underutilized schools. [1/11/22 N.T. at 7983 (Hite)].

1381. From the 2011-12 to the 2018-19 school year, SDP increased the amount of its unassigned fund balance from -\$147,615,522 to \$80,443,233, a positive improvement of \$228,058,755. [1/24/22 N.T. at 10312-13 (Monson); PX-01823].

1. For the 2019-2020 fiscal year, SDP maintained a budgetary operating fund balances of \$172.8 million. [LR-03351-00014; 1/24/22 N.T. at 103332 (Monson)].

1382. SDP expects to receive approximately \$1.8 billion in emergency federal ESSER funding. [1/24/22 N.T. at 10202 (Monson)].

1383. SDP is using this federal funding to hire assistant principals, school psychologists, social workers, reading intervention specialists, English language teachers, special education teachers, and general classroom teachers. [1/24/22 N.T. at 10204-05 (Monson)].

1384. Using ESSER funds, SDP doubled the amounts of its reimbursements for teacher-purchased classroom materials. [1/24/22 N.T. at 10356 (Monson)].

viii. Extracurricular Activities and Athletics

1385. All of SDP’s elementary schools offer art and instrumental music education. In 2019, SDP received a Best Communities for Music Education Award from the National Association of Music Merchants Foundation. [1/11/22 N.T. at 7963 (Hite); LR-03124-00002].

1386. In its budget for the current school year (2021-22), SDP allocated \$8.9 million to itinerant music programming. [PX-03074-0024].

1387. In its budget for the current school year (2021-22), SDP allocated \$9,254,821 to athletics. [PX-03074-0084].

1388. In its budget for the current school year (2021-22), SDP allocated \$3,308,469 for extracurricular activities clubs. [PX-03074-0084].

ix. Class Size

1389. In its school budget guide for the current school year (2021-22), SDP allocates to schools a general-education teacher budget and does so according to suggested maximum class size. For the current year, SDP's suggested maximum class size is 30 students for kindergarten through 3rd grade, 33 students for 4th through 12th grades, and 24 students for career and technical education schools. [PX-03043-0007].

x. Student Supports

1390. As of 2018, school nurses and counselors are available in each of SDP's schools. [LR-03124-00002].

1391. SDP has a Support Team for Education Partnerships ("STEP"), which is a program through which it provides clinical social workers, case managers, family peer specialists, and school behavioral consultants to schools in need of those services. [1/11/2021 N.T. at 7913 (Hite)].

1392. SDP has approximately 24 community schools. A community school provides students and families with additional services and supports, such as access to a food kitchen or a health and behavioral health facility. [1/11/22 N.T. at 7910-12 (Hite)].

1393. For the current school year (2021-22), SDP identified 38 schools that it will provide with additional funding to hire additional reading specialists. [PX-03043-0027].

1394. For the current school year (2021-22), SDP will provide 12 of its high schools with additional funding to establish 9th Grade Academies, which are supposed to "provide

a personalized learning environment for students at risk of dropping out who need academic, social, and emotional encouragement from teachers and school staff.” [PX-03043-0027, 0028].

1395. For the current school year (2021-22), SDP has allocated funding to establish full-day kindergarten in all of its elementary schools. [PX-03043-0028].

1396. For the current school year (2021-22), SDP purchased online adaptive learning programs/interventions for schools to support ELA and math interventions. [PX-03043-0029].

xi. Pre-K

1397. SDP provides free pre-K with unlimited enrollment and, in doing so, serves about 10,000 children. The pre-K program is subsidized by Pre-K Counts funding that the district receives from the Commonwealth. Pennsylvania has designated the program as “high quality.” [1/11/22 N.T. at 7986-87 (Hite)].

xii. Student Outcomes

1398. In 2021, SDP stated that “[t]here were measurable improvements in college- and career-readiness, early literacy, staffing, and fiscal stability over the past four years.” [LR-03351-00013; 1/24/22 N.T. at 10323-24 (Monson)].

1399. According to SDP, “[m]ore students are graduating and have strong reading skills, more classrooms are led by highly-trained educators, more classrooms are healthy and welcoming learning environments, and more services are in schools to support students and families.” [LR-03351-00013; 1/24/22 N.T. at 10324-25 (Monson)].

1400. In the 2019-20 school year, SDP’s four-year cohort graduation rate was 70.12%, its five-year cohort graduation rate was 74.16%, and its six-year cohort graduation rate was 70.19%. [LR-05043A-00003].

1401. The number of students on track to graduate has increased by 3,000 students. [LR-03351-00014; 1/24/22 N.T. at 10328 (Monson)].

1402. In 2018-19, the seventh year of SDP's school progress report, SDP has twice as many high performing schools, and 50% fewer lower performing schools. [LR-03351-00014].

1403. Using a scoring metric developed internally for SDP, 75% of the district's schools (156 schools) increased their score on the scoring metric. [LR-03351-00014; 1/24/22 N.T. at 10328-29 (Monson)].

1404. In the 2018-19 school year, 27% of SDP's 12th-grade students scored a 3 or better on an advanced placement exam, a 4 or better on an IB exam, or competent or advanced on a NOCTI exam, or passed a dual enrollment course. By comparison, in the 2013-14 school year, only 9% of the district's 12th-grade students earned these achievements. [1/11/22 N.T. at 7887 (Hite); PX-03086-0001].

1405. In 2018, SDP students' academic progress outpaced the Pennsylvania average in every subject and grade that was tested. [1/11/22 N.T. at 7962 (Hite); LR-03124-00002].

1406. In 2019, SDP's average growth index rating for PSSA ELA was 17.61, which was higher than every other school district in Pennsylvania, and more than 70% higher than the next highest score (Penn Hills Charter School for Entrepreneurship, which scored 10.28). [1/13/22 N.T. at 8205-06 (Hite); LR-03190].

1407. In 2019, SDP's average growth index rating for PSSA Math was 24.65. Chambersburg Area School District had the next highest rating of this type, at 10.52. [PX-04921].

1408. In the 2018-19 school year, approximately 7,300 SDP students earned more than 13,400 industry certifications. [LR-03351-00014].

1409. As of the 2018-19 school year, 40% of SDP students scored proficient or advanced on the science PSSA – the highest percentage going back to the 2012-13 school year. [PX-03086-0001].

1410. As of the 2018-19 school year, 8% of SDP students scored advanced on the Algebra I Keystone Exam – the highest percentage going back to the 2012-13 school year. [PX-03086-0001].

1411. As of the 2018-19 school year, SDP scored 24.65 on the average growth index for the math PSSA. By comparison, between the 2012-13 and 2015-16 school years, SDP's average growth index score for the math PSSA was 16.48 or less. [PX-03086-0001].

1412. As of the 2018-19 school year, 22% of SDP's 12th-grade students achieved college readiness benchmarks on either the SAT or ACT – an increase of 10% since the 2013-14 school year. [PX-03086-0001].

1413. In the 2018-19 school year, SDP increased its graduation rate among district-managed schools by 5% over the previous year. [LR-03351-00014].

1414. Under Action Plan 3.0, SDP doubled the number of its high-performing schools and reduced its lowest-performing schools by half. [1/13/22 N.T. at 8095-96 (Hite); LR-03126-00002].

1415. Under Action Plan 3.0, SDP increased its four-year graduation rate by 6%. [1/13/22 N.T. at 8101 (Hite); LR-03127].

1416. SDP has made progress in educating its students since it was declared in financial distress by the Commonwealth in 2001. [LR-03360-00124].

1417. Since emerging from the SRC's control in 2018, the SDP has maintained and enhanced its financial stability, while further improving its academic programs. SDP's improvements since 2018 have been based on sound financial management and improved administration. [LR-03360-00049].

1418. The record does not support the contention that more funding from the Commonwealth would improve academic outcomes in the SDP.

B. Otto-Eldred

1419. Petitioners presented the testimony of Matthew Splain, the superintendent of Otto-Eldred and the board president of PARSS. [12/21/2021 N.T. at 6112 (Splain)].

1420. Otto-Eldred did not join this case as a Petitioner. [12/21/2021 N.T. at 6275 (Splain)]. Nevertheless, Mr. Splain offered his opinion that Otto-Eldred receives inadequate school funding. [12/21/2021 N.T. at 6117-18 (Splain)].

1421. In the 2019-20 school year, Otto-Eldred had total revenue per ADM of \$18,707.29 per student, ranking it 237th in the Commonwealth. [12/21/2021 N.T. at 6318-19 (Splain); LR-01642, "2019-20 Revenue Per ADM" Tab, Line 339]. Of that amount, state revenue per ADM to Otto-Eldred was \$14,561.07, while \$3,402 per ADM was generated locally. Otto-Eldred ranked 15th in the Commonwealth for state revenue per ADM. [12/21/2021 N.T. at 6319 (Splain); PX-02135, Tab 3, Line 339].

1422. Otto-Eldred typically receives about 75 to 80 percent of its funding from the Commonwealth, and generates about 10 to 15 percent of its funding from local sources. [12/21/2021 N.T. at 6317 (Splain)].

1423. In the 2019-20 school year, the rate of economically disadvantaged students in Otto-Eldred was 55.11%, and 19.26% of students required special education services. [12/21/2021 N.T. at 6127, 6131 (Splain); PX-04814].

1424. Despite these challenges – and Mr. Splain’s opinion that the district’s funding is inadequate – Otto-Eldred provides many opportunities for its students. As Otto-Eldred’s website broadcasts: “We have it all: excellent academic standards, small class sizes, preschool program, dual-credit class offerings, innovative leadership, [and a] wonderful community.” [12/21/2021 N.T. at 6281 (Splain); LR-00369-00006, 00007]. Otto-Eldred also participates in a career and technical center that is cosponsored by ten other districts in its Intermediate Unit and runs an agricultural education program within the district. [12/21/2021 N.T. at 6218, 6222 (Splain)].

1425. Otto-Eldred’s schools “provide safe, empowering learning environments for preschool through 12th grade students in the communities of Eldred, Duke Center and Rixford, Pennsylvania.” [12/21/2021 N.T. at 6279 (Splain)]. Otto-Eldred has excellent programs and services. [12/21/2021 N.T. at 6280 (Splain)]. According to its elementary school website, “technology is integrated into every classroom.” [12/22/2021 N.T. at 6487 (Splain)].

1426. The District’s website states that “[a]ll students who graduate from the Otto-Eldred School District will be college or career ready, possessing the literacy skills they need to be an effective member of society.” [12/21/2021 N.T. at 6283 (Splain); LR-00369-00004].

1427. Otto-Eldred offers all students a pre-school program, which it refers to as four-year-old kindergarten. After completing the four-year-old kindergarten program, students typically attend the regular kindergarten class. [12/21/2021 N.T. at 6279-80 (Splain)]. Their pre-K program is high quality. [12/21/2021 N.T. at 6282 (Splain)].

1428. Otto-Eldred’s class sizes range from the upper teens to the lower 20s. [12/21/2021 N.T. at 6282 (Splain)].

1429. Otto-Eldred offers an afterschool tutoring program. [12/21/2021 N.T. at 6287 (Splain)].

1430. Otto-Eldred offers summer school to any students who choose to attend. [12/21/2021 N.T. at 6290 (Splain); LR-02325-00022].

1431. As stated in its current district-level plan, the “student-to-teacher average is just above 15 to 1, which is a favorable level for teachers to meet the individual needs of students.” [12/21/2021 N.T. at 6293 (Splain)].

1432. The courses offered as part of the dual-enrollment program include English, history, civics, human biology, calculus, chemistry, environmental science, and psychology. [12/22/2021 N.T. at 6468–69 (Splain)].

1433. Overall, Mr. Splain believes that the quality of the programs that Otto-Eldred offers are “fairly good,” and that the parents of students in Otto-Eldred are “fairly happy.” [12/21/2021 N.T. at 6280–81 (Splain)].

1434. Using ESSER funds, Otto-Eldred recently purchased a new elementary ELA curriculum and associated materials. [12/21/2021 N.T. at 6334 (Splain)].

1435. Otto-Eldred also hired a social worker and two behavior specialists using ESSER funds. The district now has five behavior specialists in total. [12/21/2021 N.T. at 6335 (Splain)].

1436. Otto-Eldred also has an ELA interventionist and a math interventionist. Otto-Eldred’s math interventionist splits their time between the interventionist position and teaching as a STEM instructor in the district. All elementary school students take a course in STEM on a rotating basis. [12/21/2021 N.T. at 6335-37 (Splain)].

1437. Otto-Eldred recently issued a \$3.6 million bond. It plans to use the proceeds to address a variety of facility issues, including upgraded lighting, roof repair in its elementary school, updating their boiler and improving the HVAC system in their high school building, and installing a new boiler. [12/21/2021 N.T. at 6339-40 (Splain)].

1438. In order to graduate, Otto-Eldred high school students must pass four credits in English, four credits in history, eight credits in STEM, 6.2 credits in a electives, and health/physical education. [12/22/2021 N.T. at 6475 (Splain); LR-03240-00004].

1439. In addition, Otto-Eldred students must complete a graduation project. The project is a combination of activities that typically include preparing a resume and cover letter, participating in a mock interview, and some community service. [12/22/2021 N.T. at 6492 (Splain)].

1440. Otto-Eldred offers a National Honor Society. [12/22/2021 N.T. at 6478 (Splain); LR-03240-00005]. Otto-Eldred's student handbook also lists other extracurricular activities, such as junior/senior band, junior/senior choir, theatre arts, student council, peer helpers/mediators, musicals, quiz team, marching band, show choir, and jazz band. [LR-03240-00014].

1441. Otto-Eldred offers a number of sports, including baseball, basketball, cross-country, cheerleading, football, golf, softball, track & field, volleyball, wrestling, swimming and diving, and trap team (which refers to competitive clay pigeon shooting). [12/22/2021 N.T. at 6481 (Splain); LR-03240-00015].

1442. Otto-Eldred's graduation rate for the 2019-20 school year was higher than the state average. [12/21/2021 N.T. at 6256 (Splain)]. Otto-Eldred's typical graduation rate is about 90%. [12/21/2021 N.T. at 6285 (Splain)]. As the Future Ready Index for that year indicates,

84.1% of Otto-Eldred high school graduates transitioned to school, military, or work, which exceeded the statewide average of 81.1%. [12/21/2021 N.T. at 6308 (Splain); PX-02848-0010].

1443. On the 2019 Keystone exams, the percentage of Otto-Eldred students scoring proficient or advanced was 55.8% for math, 64.4% for ELA and 68.2% for biology. [12/21/2021 N.T. at 6251–52 (Splain); PX-04857]. The eighth grade PSSA scores for Otto-Eldred students were “just above the state average” in math, “a bit below average” in ELA and “a bit below average” in science. [12/21/2021 N.T. at 6304–06 (Splain)].

1444. As Mr. Splain agreed, it is unrealistic to anticipate that Otto-Eldred could achieve 100% proficiency on the PSSAs and Keystones. [12/21/2021 N.T. at 6370 (Splain)]. As Mr. Splain acknowledged, even with his “dream list” of personnel, he could not guarantee that Otto-Eldred students would score proficient or better on standardized exams. [12/22/2021 N.T. at 6460 (Splain)].

1445. As noted in the Future Ready Index for the 2019-2020 school year, Otto-Eldred’s junior-senior high school students scored higher than the statewide growth goal on math and algebra, English language arts, science and biology. [12/21/2021 N.T. at 6304–06 (Splain); PX-02848-0002 to -0003].

1446. As the Future Ready Index for the 2019-2020 school year also shows, 73.6% of Otto-Eldred high school students participated in “rigorous courses of study,” which was higher than the state average of 57.5%. [12/21/2021 N.T. at 6257–58 (Splain); PX-02848-0009]. In particular, through its dual enrollment program, 58.5% of Otto-Eldred’s high school students participated in college course enrollment. [12/21/2021 N.T. at 6258-59 (Splain); PX-02848-0009].

1447. The facts presented with respect to Otto-Eldred demonstrate that the district is offering an adequate education to its students and, therefore, do not support Petitioners' claim of systemic deficiencies in Pennsylvania's public education system.

C. Springfield Township

1448. Petitioners presented the testimony of Dr. Nancy Hacker, the retired former superintendent of Springfield Township. [1/25/22 N.T. at 10420-21 (Hacker)]. Her testimony was intended to provide information regarding the educational opportunities available in an illustrative higher wealth school district.

1449. Dr. Hacker testified that, in her view, Springfield Township is sufficiently funded and provides an adequate education to its students. [1/25/22 N.T. at 10559 (Hacker)].

1450. In 2019-20, Springfield Township had revenues of \$22,874 per ADM, which included \$4,289 per ADM in State revenue and \$18,158 in local revenue. This ranked Springfield Township number 453 in State revenue per ADM and number 20 in local revenue. [PX-02135, Tab 3, Line 374].

1451. As Dr. Hacker testified, despite being sufficiently funded, not all students in Springfield Township experience the same outcomes. For instance, not all students at Springfield Township are proficient or advanced on the PSSA or Keystone exams; about 40 percent of twelfth grade students at Springfield Township have never taken a rigorous course of study; not all students who attend Springfield Township graduate; and some students who graduate from Springfield Township attend four-year colleges, while others attend community colleges, and some do not attend any post-secondary institution. [1/25/22 N.T. at 10560-61, 10569 (Hacker)].

1452. Indeed, about 37.5 percent of Springfield Township students in 6th through 8th grade in the 2018-19 school year scored lower than proficient on the math PSSA, nearly 25 percent of Springfield Township students in 6th through 8th grade scored lower than proficient on

the English Language Arts PSSA, and nearly 25 percent of Springfield Township students in 6th through 8th grade scored lower than proficient on the science or biology PSSA. [1/25/22 N.T. at 10563 (Hacker); PD-00006-0003].

1453. Furthermore, Springfield Township still has a significant proficiency gap on middle school PSSA scores between economically disadvantaged and non-disadvantaged students. For science, there is an approximately 45 percent gap in PSSA results between economically disadvantaged students and the all-students group. For English language arts, the gap is approximately 33 percent, and for math, the gap is approximately 34 percent. [1/25/22 N.T. at 10563-65 (Hacker); PD-00006-0003]. While the gap between economically disadvantaged students and the all student group narrows for the Keystone exams, it remains at approximately 10 points in ELA, 9 points in math and 13 points in science/biology. [PD-00006-0013]

1454. Likewise, at Springfield Township High School, there is nearly a 25 percent gap between the black student group and the white student group on both the ELA/literature Keystone exam and the mathematics/algebra Keystone Exam. [PD-00006-0013].

1455. As Dr. Hacker agreed, the performance gap between black students and other students at Springfield Township High School on the Keystone exams is not explained by Springfield Township devoting more resources to white students than black students. [1/25/22 N.T. at 10565-66 (Hacker)]. Similarly, the gap in performance scores between economically disadvantaged students and all other students is not explained by Springfield Township spending fewer resources on economically disadvantaged students. [1/25/22 N.T. at 10567 (Hacker)].

1456. In its own internal ranking of students for class ranking purposes, Springfield Township measures students according to their GPA and the weight of the courses they took. The district did not factor in PSSA or Keystone exam scores when ranking students.

[1/25/22 N.T. at 10612 (Hacker)]. As Dr. Hacker agreed, standardized test scores do not provide a complete picture of a student's achievement. [1/25/22 N.T. at 10626-27 (Hacker)].

1457. Springfield Township does not require a proficient or advanced score on Keystone exams as a graduation requirement. Some students at Springfield Township have graduated and earned a diploma without achieving proficiency on the algebra Keystone exam. Those students were able to demonstrate proficiency in other ways. [1/25/22 N.T. at 10572-73 (Hacker)].

1458. About 60 percent of twelfth grade students at Springfield Township have taken at least one rigorous course of study, meaning that 40 percent have not. [1/25/22 N.T. at 10569 (Hacker); PD-00006-0021]. Only about 40 percent of black students and 42.6 percent of economically disadvantaged students at Springfield Township have taken at least one rigorous course of study. [1/25/22 N.T. at 10569-70 (Hacker); PD-00006-0021].

1459. As Dr. Hacker agreed, it is difficult to parse out the impact of individual educational resources or initiatives on student achievement. [1/25/22 N.T. at 10567-68 (Hacker)]. As she also agreed, there are resources other than money that contribute to the district's success. For instance, in addition to its resources, Springfield Township is successful because the district has a committed group of staff members. [1/25/22 N.T. at 10576 (Hacker)]. Parental support is also an important component of a student's ability to succeed in school. [1/25/22 N.T. at 10580 (Hacker)].

1460. Furthermore, as Dr. Hacker agreed, a student's motivation to do well in school factors into whether the student performs well in school and every school has students who are not motivated to perform well, despite efforts of the school and the students' parents. [1/25/22 N.T. at 10582-83 (Hacker)].

1461. Dr. Hacker’s testimony also demonstrates that even higher wealth school districts must make choices about how to spend their money. Dr. Hacker agreed that if Springfield Township had additional funding, it could always do more. [1/25/22 N.T. at 10559 (Hacker)].

1462. In this regard, Springfield Township does not offer a number of programs or services that are provided by one or more of the Petitioner Districts. For instance, Springfield Township does not offer an international baccalaureate program; does not offer a STEM academy or an academy for the performing arts; does not have a preschool program or a 4-K program; and does not offer a Junior ROTC program. [1/25/22 N.T. at 10585-89 (Hacker)]. Unlike Lancaster, Springfield Township opted to use Chromebooks rather than iPads for students, because Chromebooks were easier to replace and more cost-effective. [1/25/22 N.T. at 10589 (Hacker)].

1463. Springfield Township’s class sizes average 20 to 21 students in kindergarten, 21 to 22 students in first and second grade, 24 to 25 students in third through fifth grade, and 25 to 26 students in sixth through twelfth grade. [1/25/22 N.T. at 10592-93 (Hacker)]. This is larger than the class size in some of Petitioner School Districts and smaller than the class size in others.

1464. For the 2020-21 school year, Springfield Township classroom teachers had an average of 13.3 years of experience. [1/25/22 N.T. at 10594-95 (Hacker); LR-01969, “LEA Averages” Tab, Line 657, Column AA]. This is less than the average experience of classroom teachers in Wilkes-Barre (17.6 years); Greater Johnstown (15.7); Panther Valley (15.2 years); and Shenandoah Valley (15.0 years). [LR-01969, “LEA Averages” Tab, Lines 758, 275, 513, and 621, Column AA].

1465. Dr. Hacker’s testimony supports the conclusion that school districts cannot guarantee particular outcomes for their students. Even school districts who believe that they are

sufficiently funded and provide an adequate education to their students, experience some percentage of students who do not graduate; do not transition to college, career or the military; and do not achieve proficiency on Pennsylvania standardized assessments.

1466. Based on Dr. Hacker’s testimony and other record evidence, the Court concludes that Springfield Township provides an adequate education to its students, even though certain Springfield Township students fail to graduate college-and-career ready.

1467. Because Pennsylvania’s constitution does not require uniformity, the Court finds that any effort to compare the quality of education provided by Springfield Township to the quality of education provided by other school districts in Pennsylvania is not probative of the constitutional issues presented by this case.

VIII. SCHOOL CHOICE

1468. As discussed above, the system of public education established by the Pennsylvania General Assembly provides school choice opportunities for students who are dissatisfied with the education provided by the schools operated by their local school districts, or who otherwise would prefer to attend another school.

1469. All students in Pennsylvania have an opportunity to attend one of the Commonwealth’s public charter schools, either a brick-and-mortar charter school or a cyber charter school. Additionally, the EITC and OSTC programs established by the General Assembly allow businesses to make contributions to the programs and claim a tax credit in connection with those contributions. [2/2/22 N.T. at 11365-67 (Anderson)]. Under these programs, low-income students and students who attend low-achieving public schools receive funding in the form of scholarships that help them to attend a non-public school or a participating public school.

1470. Legislative Respondents presented the testimony of Dr. Maurice Flurie (“Dr. Flurie”), the former CEO of Commonwealth Charter Academy, and Brian Cote (“Mr. Cote”),

the Director of Curriculum Instruction and Assessment at 21st Century Cyber Charter School (“21st Century”). Both Commonwealth Charter Academy and 21st Century are cyber charter schools that operate in Pennsylvania. [2/8/22 N.T. at 12272-74 (Flurie); [2/16/22 N.T. at 13876 (Cote)].

1471. Legislative Respondents also presented the testimony of Aaron Anderson (“Rev. Anderson”), the CEO and Head of School of Logos Academy, a faith-based private K-12 school, located in York, Pennsylvania, that primarily serves students who live in poverty.

A. Commonwealth Charter Academy

i. Background

1472. Commonwealth Charter Academy was one of Pennsylvania’s first public cyber charter schools, and became operational in 2003. [2/8/22 N.T. at 12279-80 (Flurie)].

1473. Any student who is a resident of Pennsylvania is eligible to enroll at Commonwealth Charter Academy. [2/8/22 N.T. at 12303 (Flurie)]. Students who enroll at Commonwealth Charter Academy do not have to pay an additional fee to enroll there. [2/8/22 N.T. at 12304 (Flurie)]. Commonwealth Charter Academy students reside in virtually every county and school district in Pennsylvania. [2/8/22 N.T. at 12289 (Flurie)].

1474. Commonwealth Charter Academy supplies its students with the hardware that they need to attend the school. This hardware includes a laptop and monitor, along with textbooks and manipulatives that are needed for lessons. The school also provides its students’ families with a subsidy for their internet connectivity. [2/8/22 N.T. at 12303-04]

1475. Commonwealth Charter Academy has a present enrollment of about 21,000 students, from Kindergarten through 12th grade. [2/8/22 N.T. at 12282 (Flurie)].

1476. During Dr. Flurie’s tenure with Commonwealth Charter Academy, the school’s total enrollment increased from 1,200 to 1,500 up to 21,000. The COVID-19 pandemic

accelerated this growth because, during the pandemic, families wanted a more consistent school environment than what traditional public schools could offer. [2/8/22 N.T. at 12285-87 (Flurie)].

1477. Commonwealth Charter Academy serves underserved students, *i.e.*, students who are living in poverty, not performing well, or just not thriving in the traditional public school classroom setting. [2/8/22 N.T. at 12275 (Flurie)].

1478. Traditionally, about 60 to 70 percent of Commonwealth Charter Academy's student body is classified as economically disadvantaged, which is defined as students who qualify for free and reduced-price lunch ("FRPL"). [2/8/22 N.T. at 12282-83 (Flurie)].

1479. Generally, about 20 to 25 percent of Commonwealth Charter Academy's student body is classified as special education. [2/8/22 N.T. at 12283 (Flurie)].

1480. About 30 percent of Commonwealth Charter Academy's study body identifies as African-American. [2/8/22 N.T. at 12283 (Flurie)].

1481. The percentage of Hispanic students who attend Commonwealth Charter Academy is growing. Dr. Flurie estimates that Hispanic students may account for up to 10 percent of the school's student body. [2/8/22 N.T. at 12283 (Flurie)].

1482. Fifty to 60 percent of Commonwealth Charter Academy's student body identifies as White. [2/8/22 N.T. at 12284 (Flurie)].

1483. Traditionally, about 70 percent of Commonwealth Charter Academy students were at least one grade level behind academically at the time of their enrollment in the school; about 40 percent were two or more years behind academically. [2/8/22 N.T. at 12287-88 (Flurie)].

1484. Based on feedback that it received from its students' parents, Commonwealth Charter Academy's understanding was that many of the students came to it after

leaving their local traditional school district because they and their families were dissatisfied with the school district. [2/8/22 N.T. at 12402-03 (Flurie)].

1485. Commonwealth Charter Academy provides its students with an adequate education and an opportunity to become college-and-career ready. [2/8/22 N.T. at 12403 (Flurie)].

ii. Curriculum

1486. Commonwealth Charter Academy provides its elementary school students (grades K-5) with opportunities to receive instruction in core subjects, including math, English language arts, science, social studies, art and music, health and physical education. [LR-00049-00013]. In addition, Commonwealth Charter Academy offers its elementary school students opportunities to take honors classes. [LR-00049-00013; 2/8/22 N.T. at 12309-10 (Flurie)].

1487. Commonwealth Charter Academy provides its elementary school students with opportunities to take a career readiness course that coaches students in gaining employment and developing employment skills. [2/8/22 N.T. at 12310-11 (Flurie)]. Commonwealth Charter Academy also provides its elementary school students with opportunities to take electives in world languages including Chinese, French, German, Japanese, and Spanish. [2/8/22 N.T. at 12312 (Flurie); LR-00049-00013].

1488. Commonwealth Charter Academy provides its middle school students (grades 6-8) with opportunities to receive instruction in core subjects, including math, English language arts, science, social studies, art and music, health and physical education. [LR-00049-00013]. In addition, Commonwealth Charter Academy offers its middle school students opportunities to take honors classes. [LR-00049-00013; 2/8/22 N.T. at 12314-15 (Flurie)].

1489. Commonwealth Charter Academy provides its middle school students with opportunities to take a career readiness course that coaches the students in gaining employment and developing employment skills. [2/8/22 N.T. at 12310-11 (Flurie)]. Commonwealth Charter

Academy also provides its middle school students with opportunities to take electives in journalism, digital art and photography, and world languages including Arabic, Chinese, French, German, Japanese, and Spanish. [2/8/22 N.T. at 12312 (Flurie); LR-00049-00013].

1490. Commonwealth Charter Academy provides its high school students (grades 9-12) with opportunities to receive instruction in core subjects, including math, English language arts, science, social studies, art and music, health and physical education. [LR-00049-00014]. In addition, Commonwealth Charter Academy offers its high school students opportunities to take honors, AP, and dual enrollment courses. [2/8/22 N.T. at 12317-21 (Flurie); LR-00049-00010, 00014]. Commonwealth Charter Academy also provides its high school students with opportunities to take classes in career readiness. [2/8/22 N.T. at 12318 (Flurie); LR-00049-00014].

1491. Commonwealth Charter Academy provides its high school students with the opportunity to take a wide variety of elective courses, including courses in world languages (including Spanish, French, Japanese, Chinese, Latin, German, Arabic, and Sign Language), English electives (including journalism, speech and debate, and others), Science electives (including astronomy, anatomy and physiology, health sciences, and aquaponics), social studies electives (including economics, geography, psychology, sociology, criminal justice, and African American history), business electives (including entrepreneurship, intro to business, hospitality and tourism, marketing, and others), educational technology electives (including game design, web design, computer science, coding, cyber security, and others), physical education and health, arts and humanities (including 3D art, drawing studio, digital art, music theory, and others), family and consumer science electives (including parenting, counseling and mental health, cosmetology, and others), and college prep SAT and ACT courses. [2/8/22 N.T. at 12318-29 (Flurie); LR-00049-00014].

1492. Commonwealth Charter Academy offers a program called Career Pathways, which allows students to conduct self-assessments, guided by a counselor, in order to identify their interests and aptitudes. The program helps students to identify potential career pathways, which could include mathematics and engineering, construction trades, or education, for example. Each pathway is associated with course recommendations. [2/8/22 N.T. at 12334-36 (Flurie)].

iii. Facilities and Programs

1493. Commonwealth Charter Academy has programs and facilities that are focused on agriculture, called AgWorks, and technology, called TechWorks. Commonwealth Charter Academy is also developing a program and facility that will be focused on the medical industry, which will be referred to as MedWorks. Commonwealth Charter Academy chose to create these programs and facilities because they represent the three largest sectors of employment in Pennsylvania. [2/8/22 N.T. at 12345 (Flurie)].

1494. Commonwealth Charter Academy's AgWorks program includes the aquaponics courses that the school offers at the AgWorks facility. This facility includes a 6,000-square-foot aquaponics research and drawing facility and CRISPR genetics lab. The courses involve instruction in all of the farming or industrial processes that are associated with aquaponics - growing, farming, and research. The genetics lab with CRISPR technology allows for gene manipulation and gene splicing. [2/8/22 N.T. at 12324-26 (Flurie)].

1495. Commonwealth Charter Academy's TechWorks facility is located in the Pittsburgh region. TechWorks focuses on modern technology, from robotics to cybersecurity to computer-assisted drafting to programming. [2/8/22 N.T. at 12342-43 (Flurie)].

1496. During Dr. Flurie's tenure as CEO, Commonwealth Charter Academy was developing a facility called MedWorks, at a location close to Philadelphia. MedWorks is intended

to focus on professions in the medical industry, from radiology techs to doctors and nurses. The intent is to incorporate MedWorks into the coursework that the school offers to students. [2/8/22 N.T. at 12343-45, 12348 (Flurie)].

1497. Commonwealth Charter Academy offers a College and High School Program, which allows students to take college-level courses to satisfy certain graduation requirements. During Dr. Flurie's tenure, Harrisburg University and Central Penn College participated in the program. The participating colleges provided course content to Commonwealth Charter Academy or awarded college credit for the successful completion of certain courses that the school's teachers taught to its students. Students needed to be ready for college-level work to be eligible to participate in the program. [2/8/22 N.T. at 12336-38 (Flurie)].

1498. Commonwealth Charter Academy has 17 facilities, called Family Service Centers, where teachers and administrators work. They provide a place for students to socialize and meet for academic field trips. Students can also visit a Family Service Center for academic support. In establishing these facilities, the school's goal was to have a physical facility within a one-hour drive from any student. Commonwealth Charter Academy owns the vast majority of its facilities. [2/8/22 N.T. at 12289-91, 12292-93 (Flurie)].

1499. Commonwealth Charter Academy teachers can teach out of the Family Service Centers, from home, or a mixture of both. The Family Service Centers provide teachers with a cubicle with technology to conduct classes, as well as production studios that teachers can use if they need more camera angles or need to use demonstratives or manipulatives. [2/8/22 N.T. at 12291-92 (Flurie)].

iv. Teachers

1500. Dr. Flurie estimates that, at the time of his retirement from the school in 2021, Commonwealth Charter Academy employed about 600 teachers and 100 to 125 staff. All

of Commonwealth Charter Academy's teachers were certified to teach in Pennsylvania. [2/8/22 N.T. at 12362 (Flurie)].

1501. Commonwealth Charter Academy evaluated its teachers in two ways. First, principles would observe classes. Second, the school would submit surveys to families to solicit feedback. Based on these evaluations, Commonwealth Charter Academy had a high-quality teaching staff. [2/8/22 N.T. at 12363-64 (Flurie)].

1502. On average, during Dr. Flurie's tenure, teachers at Commonwealth Charter Academy had about seven years of experience teaching. [2/8/22 N.T. at 12368-69 (Flurie)].

1503. At the time of Dr. Flurie's retirement, Commonwealth Charter Academy started entry-level teachers at a salary of about \$45,000 or \$47,000 per year. The top of the teacher salary scale was approximately \$80,000 to \$85,000 per year. [2/8/22 N.T. at 12364 (Flurie)].

1504. Commonwealth Charter Academy has provided an in-depth teacher induction program for new teachers, not only to help them adjust to teaching in a virtual environment, but also to help them become more engaged and involved with their students' families. [2/8/22 N.T. at 12367-68 (Flurie)]. Commonwealth Charter Academy has designated experienced teachers as master teachers who mentor newer, less experienced teachers. [2/8/22 N.T. at 12365 (Flurie)].

1505. Teachers at Commonwealth Charter Academy are generally available from 7 a.m. until 4 p.m. to assist their students with questions. Commonwealth Charter Academy also has an Evening Support Program. As part of that program, certified staff are available for questions from 4 p.m. to 8 p.m. Also, the school keeps virtual classrooms open until 6:30 p.m., and students can log into those classrooms for help. [2/8/22 N.T. at 12300-02 (Flurie)].

1506. Commonwealth Charter Academy provides students with virtual office time, which consists of office hours during which teachers are available to students who are seeking help. The virtual office time is scheduled throughout the day, but the focus is on times when students would be likely to seek help. [2/8/22 N.T. at 12349-51 (Flurie)].

v. Student Supports

1507. Commonwealth Charter Academy assigns an academic advisor to each of its students. Academic advisors ensure that students are on track academically. Students can meet with their academic advisors on an as-needed basis. [2/8/22 N.T. at 12349 (Flurie)].

1508. Commonwealth Charter Academy modifies instruction for English-language learner students by combining instruction in their native language through translation with resources to help students become more skilled in English. During Dr. Flurie's tenure as CEO, Commonwealth Charter Academy employed about six ELL teachers. It also contracted with additional ELL teachers. Commonwealth Charter Academy provided translation services to its students throughout their tenure at the school. [2/8/22 N.T. at 12356-58 (Flurie)].

1509. Commonwealth Charter Academy employed remedial teachers whose job was to provide additional assistance to students, as needed, in all of the core subject areas. Dr. Flurie believes that, during his tenure as CEO, Commonwealth Charter Academy had sufficient teachers and resources to serve the remedial education needs of its students. [2/8/22 N.T. at 12358-60 (Flurie)].

1510. During Dr. Flurie's tenure as CEO, Commonwealth Charter Academy employed about 12 school counselors. The counselors were assigned to grade levels. [2/8/22 N.T. at 12370-72 (Flurie)].

1511. During Dr. Flurie's tenure as CEO, Commonwealth Charter Academy provided students and families with psychology services. The school had agreements with private

providers and intermediate units to provide those services. The school also employed one to three school psychologists on its staff. [2/8/22 N.T. at 12373-74 (Flurie)].

1512. During Dr. Flurie's tenure as CEO, Commonwealth Charter Academy provided its students with tutoring services. To receive this tutoring, students could meet with primary or support teachers, drop into a support facility, or log in for after-hours tutoring that ran until 8 p.m. Students could also participate in the school's Learner-to-Learner Support Program, which is a kind of student-tutor network, where students with aptitude or expertise can help other students who are struggling. [2/8/22 N.T. at 12376-77 (Flurie)].

1513. Commonwealth Charter Academy has employed teaching assistants. In some instances, the teaching assistants have been certified teachers who joined the school when a teaching position was not yet open. In other cases, the teaching assistants have been individuals with a non-teaching degree who support students academically. [2/8/22 N.T. at 12369-70 (Flurie)].

1514. Commonwealth Charter Academy offers summer school options for both remedial work and enrichment classes for students who want to stay engaged academically. The school's regular certified teaching staff teach the summer school courses. [2/8/22 N.T. at 12379 (Flurie)].

vi. Extracurricular Opportunities

1515. Commonwealth Charter Academy offers students internship opportunities in traditional trades. The school's students can also develop their own internship, as long as they find a mentor or a business willing to accommodate the internship that they develop. [2/8/22 N.T. at 12338-39 (Flurie)].

1516. Commonwealth Charter Academy students can also take advantage of work-based learning programs of their own design by finding a business entity or mentor that will support them in that endeavor. [2/8/22 N.T. at 12339 (Flurie)].

1517. Commonwealth Charter Academy enters into articulation agreements with workplaces to facilitate internships and work-based learning opportunities. [2/8/22 N.T. at 12339-40 (Flurie)].

1518. Commonwealth Charter Academy offers students multiple after-school club opportunities, covering topics from debate club to fly fishing clubs to robotics and drone flying. During Dr. Flurie’s tenure, the school’s Family Services Department supervised the clubs. [2/8/22 N.T. at 12377-78 (Flurie)].

B. 21st Century Charter

i. Background

1519. Approximately 1,600 students currently attend the 21st Century Cyber Charter School. [2/16/22 N.T. at 13884 (Cote)].

1520. All Pennsylvania sixth through twelfth grade students are eligible to attend 21st Century, as long as they can provide the school with proof that they reside in the Commonwealth. [2/16/22 N.T. at 13891 (Cote)].

1521. Enrollment at 21st Century has been steadily increasing, with a spike during the COVID-19 pandemic. The enrollment nearly doubled during the pandemic, but as bricks-and-mortar schools have transitioned back into in-person instruction, 21st Century’s enrollment has returned to its pre-pandemic levels. [2/16/22 N.T. at 13886 (Cote)].

1522. Students who attend 21st Century do not pay tuition or fees to attend the school. [2/16/22 N.T. at 13892 (Cote)]. Their home school districts pay “tuition” for them to attend 21st Century, once they choose to attend the school. [2/16/22 N.T. at 14043-44 (Cote)].

1523. 21st Century operates out of two primary locations, one in West Chester, Pennsylvania, and one in Murrysville, Pennsylvania. [2/16/22 N.T. at 13935 (Cote)].

1524. 21st Century provides its students with an adequate education. 21st Century is doing a very good job with providing opportunities to students. [2/16/22 N.T. at 13962 (Cote)].

1525. 21st Century is an Apple Distinguished School, awarded in recognition of the school's commitment to high-quality technological education. [2/16/22 N.T. at 13955-56 (Cote)].

ii. Curriculum

1526. 21st Century provides its students with academic instruction in a variety of subject areas. For example, sixth grade students take language arts, math, science, ancient history, physical education, and health. Sixth grade students can also choose electives in family consumer science, art, study skills, music, technology, or middle school seminar. [2/16/22 N.T. at 13897 (Cote); LR-00004-00006]. Seventh and eighth grade students also take courses in math, language arts, science, social studies, physical education and health, and they choose from various electives. [LR-00004-00006].

1527. Additionally, 21st Century's middle school students can take computer science and coding classes through Apple's Learn to Code Adventures course. As the course description explains: "Students learn more advanced coding concepts such as event handling, advanced arrays and component-based design as they scope and build their own projects." [2/16/22 N.T. at 13901-02 (Cote); LR-00004-00013].

1528. 21st Century classes engage students through rigorous education and innovative techniques. As the course description for the school's sixth grade ancient history course explains, the course "gives students the opportunity to explore history's beginnings, world religions and how civilizations impacted not only other civilizations in the ancient world but the modern world today. Ancient Rome, Greece, India, Africa and China are explored. This will

occur through activities, forum discussions, geography studies, webcasts and real world connections to today's current events." [2/16/22 N.T. at 13901 (Cote); LR-00004-00009].

1529. 21st Century offers study skills classes to middle school students. In those classes, the students receive individualized academic support and learn techniques for engaging in rigorous education. [2/16/22 N.T. at 13899 (Cote)].

1530. 21st Century aligns its high school curriculum to the Pennsylvania State Academic Standards. [2/16/22 N.T. at 13921-22 (Cote)].

1531. 21st Century provides its high school students with the option to take electives including business law and drama and theater. [2/16/22 N.T. at 13918-19 (Cote)].

1532. 21st Century offers independent study programs that enable students to study topics that its courses do not cover. The school also offers honor societies for high-achieving students. [2/16/22 N.T. at 13927-28 (Cote)].

1533. For struggling students, 21st Century offers credit recovery courses, which help students catch up to their grade level. [2/16/22 N.T. at 13928 (Cote)].

iii. Facilities

1534. Mr. Cote believes that 21st Century has adequate educational facilities. [2/16/22 N.T. at 13939 (Cote)].

1535. 21st Century connects with students through various digital platforms, including Moodle, where students receive synchronous and asynchronous instruction, and Jigsaw, which provides an interactive platform for teachers and students to engage in live instruction. [2/16/22 N.T. at 13931-32 (Cote)].

iv. Teachers

1536. 21st Century employs approximately eighty-four teachers. During the pandemic, it hired fifty-six additional temporary staff members to help with increased enrollment. [2/16/22 N.T. at 14033-34 (Cote)].

1537. 21st Century's teaching staff is adequate to provide for student learning opportunities. [2/16/22 N.T. at 13936-37 (Cote)].

1538. In addition to providing students with flexibility through asynchronous learning, 21st Century has taken steps to increase student-teacher engagement by encouraging teachers to develop instructional videos for difficult concepts, community work sessions, day-long virtual office hours, and tutoring sessions. [2/16/22 N.T. at 13923-24 (Cote)].

v. Instrumentalities of Learning

1539. 21st Century supplies its students with a MacBook and an iPad free of charge when they enroll in the school. [2/16/22 N.T. at 13891-92 (Cote)].

1540. 21st Century students and families can be reimbursed for the cost of internet connectivity. [2/16/22 N.T. at 13892 (Cote)].

1541. 21st Century actively engages with students' families. The school provides outreach opportunities, community events, and schoolwork sessions in community venues like libraries, zoos, and parks. [2/16/22 N.T. at 13894 (Cote)].

1542. 21st Century assigns an academic advisor to each of its students. These advisors establish relationships with students and their families. [2/16/22 N.T. at 13895 (Cote)].

1543. 21st Century's middle school students take guidance courses. In these courses, counselors discuss career options with students and provide the students with academic and social-emotional support. [2/16/22 N.T. at 13898 (Cote)].

1544. 21st Century conducts a mandatory orientation program to acclimate its new students to online learning, and provides 9th-grade transition programs. [2/16/22 N.T. at 13924-25 (Cote)].

vi. Student Supports

1545. 21st Century provides academic support services like counselors and nurses. Mr. Cote believes that 21st Century has adequate support staff to meet the needs of its students. [2/16/22 N.T. at 13940-41 (Cote)].

1546. The school has a designated “learning coach,” who supports teachers and students who have technological needs; for example, a need for instruction on how to use certain educational apps. [2/16/22 N.T. at 13892-93 (Cote)].

vii. Extracurricular Opportunities

1547. 21st Century offers a variety of extracurricular activities, including a gaming club, fishing club, and book club. Additionally, 21st Century partners with its students’ home school districts to enable and encourage its students to participate in local athletics activities. [2/16/22 N.T. at 13952-54 (Cote)].

C. Logos Academy

i. Background

1548. Aaron Anderson is the CEO and Head of School of Logos Academy and has held that position since 2014. [2/2/22 N.T. at 11350, 11359 (Anderson)].

1549. Logos Academy is a faith-based private K-12 school, located in York, Pennsylvania, that primarily serves students who live in poverty. Under the Logos Academy by-laws, two-thirds of the school’s student base must live in poverty. The school serves 225 students. [2/2/22 N.T. at 11353, 11354 (Anderson)].

1550. Logos Academy is a Middle States Accredited school. [2/2/22 N.T. at 11403 (Anderson)].

1551. Logos Academy teaches students from twelve school districts, but 70 to 80 percent of its student body comes from the York City School District. [2/2/22 N.T. at 11357 (Anderson)].

ii. Curriculum

1552. Logos Academy is a classical school. It offers a core curriculum in math, reading, science, and history. The school also provides its students with opportunities to take character-formation classes and Bible classes and participate in community service activities. At the middle school level, the school instructs its students in Latin, and at the high school level, it teaches them rhetoric. [2/2/22 N.T. at 11355, 11397-98 (Anderson)].

1553. Logos Academy teaches its students by using a Socratic dialogue approach, which involves students sitting in a circle and discussing material. This style of teaching develops effective communication skills in the students and helps them to build independent thought and empathy. It also helps students to understand that, for a given issue, there can be a variety of viewpoints and all of those viewpoints can be reasonable. [2/2/22 N.T. at 11399-401 (Anderson)].

iii. Facilities

1554. Logos Academy has a school building in York. Logos Academy is also expanding its facilities to better accommodate its high school students, and it plans to add athletic facilities. The expansion project will allow Logos Academy to increase its enrollment capacity to 450 or more students. Logos Academy also built a playground for its students. [2/2/22 N.T. at 11394-96 (Anderson)].

1555. Logos Academy provides its students with access to textbooks, desks, classroom furniture, science equipment, and technology resources, including Chromebooks. Every student at Logos Academy has a Chromebook. [2/2/22 N.T. at 11396-97 (Anderson)].

iv. Teachers

1556. Logos Academy employs more than 20 part-time and full-time teachers. [2/2/22 N.T. at 11402-03 (Anderson)].

1557. Logos Academy evaluates its teachers through classroom visits and surveys to families. That data, along with test data, provides a holistic view of how its teachers are performing as educators. [2/2/22 N.T. at 11403-04 (Anderson)].

1558. On average, Logos Academy's teachers spent about seven years at the school, but some of them have been there for more than 20 years. [2/2/22 N.T. at 11404 (Anderson)].

1559. Logos Academy pays its teachers an average salary in the \$40,000 range. Logos Academy has tried to increase the salaries that it can offer, but it recognizes that it is on the lower end of the pay scale when compared to public schools. [2/2/22 N.T. at 11405-06 (Anderson)].

1560. Logos Academy also offers health benefits, retirement benefits, and a generous paid-time-off policy. [2/2/22 N.T. at 11406-07 (Anderson)].

1561. Logos Academy provides its teachers with professional development opportunities through conferences or presentations by individuals who are experts in curriculum or certain subject matters. [2/2/22 N.T. at 11407 (Anderson)].

v. Student Supports

1562. Logos Academy offers its student support services through the Lincoln IU in York County. Those services include academic and emotional support, counseling, and

remediation. Additionally, through the Lincoln IU, Logos Academy has daily access to a social worker. [2/2/22 N.T. at 11407-08, 11410 (Anderson)].

1563. Logos Academy also offers in-house support services to students, such as academic, emotional, and spiritual support services. Logos Academy, in addition, employs a director of cultural inclusion and community engagement, who works to ensure that the school is adequately supporting and representing the cultures of its students. [2/2/22 N.T. at 11408-10 (Anderson)].

vi. Extracurricular Opportunities

1564. Logos Academy has been able to make connections with local business partners to create internship opportunities for its students. [2/2/22 N.T. at 11401 (Anderson)].

1565. Logos Academy provides its students with some after-school programming such as community-based programs (e.g., Boy Scouts or Girl Scouts), robotics, volleyball, cross-country, and tutoring. Logos Academy has partnered with area schools to allow its students to participate in those schools' athletics activities, such as cheerleading and football. [2/2/22 N.T. at 11411-13 (Anderson)].

vii. Funding Sources

1566. Almost 100% of students at Logos Academy receive tuition assistance to attend the school. Only about 12% to 15% of the school's annual operating budget is covered by tuition. [2/2/22 N.T. at 11364-65 (Anderson)].

1567. A significant portion of Logos Academy's annual budget is funded through the EITC program and the OSTC program. [2/2/22 N.T. at 11365-67 (Anderson)].

1568. For the fiscal year ending on June 30, 2019, Logos Academy received \$1,739,670 from the EITC and OSTC programs, and this money was placed into the school's tuition assistance scholarship fund. The school's total revenue for the same year amounted to

\$4,626,215. In addition to EITC and OSTC program contributions, approximately \$860,000 in other contributions was placed into the tuition assistance scholarship fund. [2/2/22 N.T. at 11373-76 (Anderson); LR-00151-00006].

1569. Without funding from the EITC and OSTC programs, Logos Academy would need to operate a much smaller school and probably could not offer a K-12 education. [2/2/22 N.T. at 11378-79 (Anderson)].

1570. Logos Academy uses a sliding scale to determine the amount of tuition for its students. The lowest tuition rate is charged to the students who live at or below the federal poverty line. [2/2/22 N.T. at 11379-80 (Anderson)].

1571. At the Logos Academy, the tuition cost is not the same as the cost to educate. For the 2021-2022 school year, the cost to educate was about \$13,000 per student. However, the average tuition revenue was \$2,000 per student. Logos Academy uses the scholarship fund to make up the difference. [2/2/22 N.T. at 11380-81 (Anderson)].

viii. Student Body Demographics

1572. Thirty-seven percent of Logos Academy families self-identify as white; 28% consider themselves Hispanic; 23% self-identify as black or African-American; and 12% consider themselves multi-ethnic or mixed-race. Although these numbers fluctuate year-to-year, they are representative of the racial and ethnic diversity in the student body. [2/2/22 N.T. at 11385-86 (Anderson); LR-00152].

1573. Of the Logos Academy student body, 59% live at or below the federal poverty line, 22% are working class, and 19% are middle or upper income. Although these numbers fluctuate year-to-year, they are generally representative of the socioeconomic makeup of the student body. [2/2/22 N.T. at 11386-87 (Anderson); LR-00152].

1574. All students at Logos Academy receive free breakfast and lunch through the National School Lunch Program. [2/2/22 N.T. at 11419-20 (Anderson)].

ix. Enrollment and Class Size

1575. Logos Academy caps class size at 18 students, but the average class size is 15 students. [2/2/22 N.T. at 11387 (Anderson); LR-00152].

1576. Enrollment at Logos Academy fluctuates from 225 to 300 students in a given year. [2/2/22 N.T. at 11387-88 (Anderson)].

x. Student Outcomes

1577. Logos Academy uses NWEA's MAPs testing and tracks how well its students perform in comparison to the national percentile. For 2018-2019, grammar school students at Logos Academy tested at the 51st national percentile in math. [2/2/22 N.T. at 11388-90 (Anderson); LR-00152].

1578. Logos Academy also tracks how its students perform on the SAT compared to the national average. For 2018-2019, Logos Academy students scored an average of 1140 on the SAT, whereas the national average for the same time period was 1068. [2/2/22 N.T. at 11390-91 (Anderson); LR-00152].

1579. When it comes to academic achievement, students at Logos Academy tend to perform at similar levels regardless of their ethnic or socioeconomic backgrounds. In 2018-2019, for example, students who lived below the federal poverty level tested in the 67th percentile on the MAP, while students who lived above the federal poverty level tested in the 69th percentile on the MAP. The narrowness of this gap tends to exist year after year. [2/2/22 N.T. at 11391-93 (Anderson); LR-00152].

1580. Nearly 100% of Logos Academy graduates go on to attend and succeed in college. The graduates who have chosen not to attend college have opted for a trade program or the military. [2/2/22 N.T. at 11414, 11416-17 (Anderson)].

xi. Family Involvement and School Culture

1581. Logos Academy emphasizes the value of family engagement. Logos Academy views school as a tool to help parents shape their children and, over the years, has hosted activities and community events to encourage families to become involved with the school and their children. Logos Academy also provides families with support so that, at home, they can better help students with schoolwork. [2/2/22 N.T. at 11417-19 (Anderson)].

1582. The culture in a school is one of the most important factors in students' ability to succeed - whether teachers and staff believe students can succeed and create a supportive culture for students. [2/2/22 N.T. at 11502 (Anderson)].

IX. ORGANIZATIONAL PETITIONERS

1583. Petitioners also presented the testimony of one representative each from PARSS and NAACP-PA (collectively, "Organizational Petitioners").

A. PARSS

1584. Only one representative from PARSS, Mr. Splain, testified at trial. Mr. Splain has been board president of PARSS for three years. Prior to becoming board president, Mr. Splain was a PARSS board member for almost ten years. [12/21/2021 N.T. at 6119 (Splain)].

1585. At the time of Mr. Splain's testimony, PARSS had 176 member school districts. [12/21/2021 N.T. at 6136 (Splain)]. Mr. Splain opined that the issue of greatest concern for PARSS is the adequacy of funding for schools in Pennsylvania. [12/21/2021 N.T. at 6152 (Splain)].

1586. As Mr. Splain agreed, every school district in the Commonwealth has its own unique set of circumstances. [12/21/2021 N.T. at 6274 (Splain)]. Although Mr. Splain is the PARSS board president, his primary responsibility pertains to Otto-Eldred and he does not know the financial circumstances or educational offerings other of PARSS member districts as he would for his own. [12/21/2021 N.T. at 6273-75 (Splain)].

1587. As Mr. Splain conceded when he was asked whether Otto-Eldred had any resources that allowed it to perform better than some other PARSS member districts: “I don’t have specific knowledge of the needs of other districts to be able to give an assessment of what they’ve been provided to be able to evaluate a comparison between the two.” [12/21/2021 N.T. at 6342 (Splain)].

1588. No testimony was presented at trial regarding the education provided at any PARSS member district other than Otto-Eldred or any Petitioner District who is a PARSS members. There is no evidence that would support any finding regarding the quality of the education provided by PARSS member districts who did not testify.

1589. Similarly, no evidence was presented at trial that would support a finding that PARSS member districts, as a group, have greater needs than non-PARSS districts, or that the current school funding system treats PARSS members inequitably.

1590. Thirty-one PARSS districts—approximately 18% of PARSS districts—received Level Up funds. This is comparable to the 20% of all Commonwealth school districts that received such funding. [12/21/2021 N.T. at 6159, 6313-15 (Splain); PD-00009-0029].

1591. In 2019-20, 157 PARSS districts (88.7% of PARSS member districts) had four-year cohort graduation rates above the state average and 155 PARSS districts (87.6% of PARSS member districts) had five-year cohort graduation rates above the state average. [LR-

05037]. The median five-year cohort graduation rate for a PARSS district was 94.1%, and three-quarters of PARSS districts had five-year cohort graduation rates of 91.5% or above. [LR-05037].

1592. PARSS supported the creation of the Fair Funding Formula. [12/21/2021 N.T. at 6231 (Splain)]. In fact, Mr. Splain personally advocated for the passage of Act 35. [12/22/2021 N.T. at 6523-24 (Splain)]. PARSS does not endorse putting all Basic Education Funding dollars through the formula, which would cause many PARSS member districts to lose funding. [12/21/2021 N.T. at 6324-25 (Splain)].

1593. PARSS supported the hold harmless clause in the Act 35 funding formula. Indeed, its then-Executive Director, Joseph Bard, testified in favor of it at hearings held by the BEF Commission. [12/22/2021 N.T. at 6418-20 (Splain)].

1594. As Mr. Splain agreed, if the hold harmless provision were eliminated, without increasing the total amount of Basic Education Funding, it would have a “devastating” impact on many PARSS member districts. [12/21/2021 N.T. at 6328 (Splain)]. For instance, Otto-Eldred would lose \$3 million out of a \$12 million budget. [12/21/2021 N.T. at 6242 (Splain)].

B. NAACP-PA

1595. NAACP is a national organization with a set of bylaws that set forth rules for the State Conferences and for the other units of the organization. There are 46 NAACP chapters within Pennsylvania that cover the whole state. [01/19/2022 N.T. at 8912 (Zeff)]. State units do have any independent existence separate from the national organization. [01/19/2022 N.T. at 8910 (Zeff)].

1596. Petitioners presented the testimony of Gregg Zeff, an attorney in Pennsylvania and New Jersey. [01/19/2022 N.T. at 8907 (Zeff)]. Mr. Zeff is Legal Redress Chair for the NAACP-PA and has served in that role twice, most recently for “a couple years.” [01/19/2022 N.T. at 8908-09 (Zeff)]. Mr. Zeff also serves as the Legal Redress Chair for the State

of New Jersey. [01/19/2022 N.T. at 8910 (Zeff)]. The role of Legal Redress Chair is a volunteer position. [01/19/2022 N.T. at 8908 (Zeff)].

1597. Mr. Zeff described the NAACP's mission as "the eradication of discrimination at all levels." [01/19/2022 N.T. at 8913-14 (Zeff)]. He explained that the NAACP is particularly concerned with the areas of "education, employment, any area where there could be any kind of discrimination or social justice issue" and that housing and voting rights are also important to the organization. [01/19/2022 N.T. at 8914 (Zeff)].

1598. Mr. Zeff became involved in the Philadelphia branch of the NAACP while working as a civil rights attorney. Mr. Zeff formed an organization called the Social Justice Law Project, which collaborated with the NAACP in handling complaints of all kinds. [01/19/2022 N.T. at 8919 (Zeff)]. As he noted, "[o]ne of the problems is the NAACP has got a big name and is known to help people, and so every kind of complaint imaginable, from people who needed a criminal lawyer to people who needed help with social services, and, of course, to people who needed educational help in any kind of [sic] – and of course, discrimination complaints." [01/19/2022 N.T. at 8919-20 (Zeff)].

1599. As Mr. Zeff testified, regarding education, the types of complaints received by the Philadelphia branch of NAACP "really ranged the gamut from my kid got a bad grade to there's no hot water in the school, the teacher hasn't been here, we can't get the services we require, kids that couldn't get their ... special needs complaints met; to disputes with a principal, disputes with a teacher, just about every kind of complaint you could imagine." [01/19/2022 N.T. at 8923 (Zeff)]. When he became Legal Redress Chair of NAACP-PA, "[i]t was a little more refined with the State than it was with Philadelphia, but it was the gamut of the same thing." [01/19/2022 N.T. at 8929 (Zeff)].

1600. As Legal Redress Chair for NAACP-PA, Mr. Zeff had a “clearinghouse role” to review the type of matter involved and “send the complaint where it needed to go.” [01/19/2022 N.T. at 8932 (Zeff)].

1601. Mr. Zeff testified that NAACP believes that “it appears that there is a direct correlation” between the complaints it receives and school funding issues because “most of these complaints come from areas where there is poverty. Most of these complaints relating to quality have to do with money.” [01/19/2022 N.T. at 8937-38 (Zeff)].

1602. As Mr. Zeff confirmed, however, he did not personally visit schools or school districts to observe firsthand the subject matter of the complaints. Rather, as he admitted, he merely “heard from other folks.” [01/19/2022 N.T. at 8952 (Zeff)].

1603. Although Mr. Zeff testified that the NAACP-PA investigated some complaints that we received, he did not share the results of any investigation conducted by NAACP-PA.

1604. Zeff also acknowledged, he does not have any personal knowledge about school funding in Pennsylvania and does not have any expertise about education policy concerning ways to improve educational outcomes for either students of color or students living in poverty. [01/19/2022 N.T. at 8938 (Zeff)].

X. INDIVIDUAL PETITIONERS

A. Individual Petitioners Who Withdrew From Case or Did Not Present Evidence

1605. In addition to the District Petitioners and Organizational Petitioners, seven parents and six students (“Individual Petitioners”) were named as individual Petitioners when this case was brought in 2014. [Petition for Review]. These thirteen Individual Petitioners represented six families.

1606. Several years before trial, on April 16, 2019, parent Angel Martinez and minor A.M., both of whom resided within the boundaries of the School District of Lancaster, sought to voluntarily withdraw as parties. [Martinez Praecepto to Withdraw].

1607. On July 25, 2019, parent Tyesha Strickland and minor E.T., both of whom resided within the boundaries of the SDP, sought to voluntarily withdraw as parties. [Strickland Praecepto to Withdraw].

1608. Shortly after the filing of Pre-Trial Statements, on June 16, 2021, parent Barbara Nemeth and minor C.M., both of whom resided within the boundaries of the Greater Johnstown School District, voluntarily withdrew as parties. [Nemeth Praecepto to Withdraw].

1609. Presently, seven Individual Petitioners representing three students remain in the case, parent Tracey Hughes and her son P.M.H., both of whom reside within the boundaries of the Wilkes-Barre Area School District; parent Sheila Armstrong, and her son S.A., both of whom reside within the boundaries of the SDP; and parents Jamella and Bryant Miller, and their daughter K.M., all of whom live within the boundaries of the William Penn School District.

1610. Only two of the Individual Petitioners in the case gave testimony, P.M.H., who testified at trial, and S.A., whose testimony was provided to the Court via deposition. At trial, P.M.H., who is now 20 years old, requested that he be referred to as Michael Horvath.

1611. No evidence was presented to this Court regarding the education received by K.M. or the claims asserted by K.M. or her parents, Jamella and Bryant Miller.

B. Michael Horvath

1612. Michael Horvath is a former student at Wilkes-Barre. He attended Kistler Elementary School and E.L. Meyers High School (“Meyers”). He graduated from Wilkes-Barre in June of 2019. [1/24/22 N.T. at 10033, 10037 (Horvath)]. Michael was in the 8th grade when this action was commenced. [1/24/22 N.T. at 10033 (Horvath)].

1613. Michael provided extensive testimony about what he viewed to be the inadequate facility conditions at Meyers. [1/24/22 N.T. at 10033-37 (Horvath)]. However, since Wilkes-Barre opened its new consolidated high school, the Meyers building is no longer in use and is being sold by the district. [1/26/22 N.T. at 11069-70 (Costello)].

1614. Similarly, Michael testified that while he attended Wilkes-Barre, the school did not own enough computers for every student in each class to use a device simultaneously. [1/24/22 N.T. at 10045 (Horvath)]. As Michael acknowledged, after he graduated, Wilkes-Barre used ESSER funds to purchase Chromebook laptops for every student. [1/24/22 N.T. at 10146 (Horvath)]. As Michael also testified, most classrooms at Meyers had Smartboards when he attended high school. [1/24/22 N.T. at 10146 (Horvath)].

1615. As Michael explained, he is an academically average student. He earned a B average in high school. [1/24/22 N.T. at 10067 (Horvath)]. Michael's class rank at the time of graduation was 75 out of 127. [PX-07012-00002].

1616. Michael achieved basic or below basic on all of his 8th grade PSSAs and his Keystones exams [1/24/22 N.T. at 10060-67 (Horvath); PX-00310; PX-00315; PX-00311; PX-00313].

1617. In 3rd, 4th, and 5th grade, Michael achieved proficient six times, basic one time, and advanced one time on his PSSAs. Michael believes that his education at Wilkes-Barre played a part in his achieving proficient and advanced on his elementary school PSSAs. [1/24/22 N.T. at 10140 (Horvath); PX-07012-00003].

1618. As evidenced by emails sent from his teachers to his mother, Michael was not always an attentive student while in high school at Wilkes-Barre and did not always take advantage of learning opportunities. [1/24/22 N.T. at 10114 (Horvath)].

1619. For instance, as Michael's 10th Grade Algebra 2 teacher wrote in an email to Tracey Hughes, "I wanted to let you know right after I graded Michael's Algebra 2 quiz that he did not do well . . . He really needs to do his work and pay attention in class. He did not hand in an assignment that was given in class before break. He is always on his phone after I give notes and have them do class work. I leave it up to some students to get their work done and ask questions. He doesn't ask me any questions in class, and I am here almost every day after school if he wants to finish his work with me. I don't know what to do. I've talked to him about his phone before. . . Please let me know what you think we can do. I don't want to see him fall further behind with the end of Quarter 2 in two weeks." [1/24/22 N.T. at 10113-14 (Horvath); LR-00142].

1620. Tracey Hughes responded to Michael's Algebra 2 teacher by stating that Michael is "lazy and girl-crazy" and that it "[s]ounds like time for some consequences." [1/24/22 N.T. at 10115 (Horvath); LR-00142].

1621. Michael could not remember what consequences came as a result of his mother receiving that email from his Algebra 2 teacher. [1/24/22 N.T. at 10116 (Horvath)]. As Michael testified, he did not disagree with anything his Algebra 2 teacher stated in her email. [1/24/22 N.T. at 10114 (Horvath)].

1622. As shown by an email from his Biology 2 teacher to Ms. Hughes in March of his senior year, and as Michael conceded, he did not always turn his work in on time in Biology 2. [1/24/22 N.T. at 10098-99 (Horvath); LR-00139]. He also failed to turn in assignments in other courses. [1/24/22 N.T. at 10098-99 (Horvath)]. As Michael's Biology 2 teacher stated in an e-mail, and as he agreed, his work "does not really reflect his ability." [1/24/22 N.T. at 10100 (Horvath); LR-00139].

1623. A subsequent email from Michael’s Biology 2 teacher to Ms. Hughes stated, “Mike is sitting with a 66 percent in Biology 2 with only 5 days to go [in the school year.]” The email stated that Michael approached the teacher and “asked what he can make up.” [1/24/22 N.T. at 10105 (Horvath); LR-00140]. As Michael conceded, even after the email from his Biology 2 teacher to his mother in March of 2019, he continued to fail to complete assignments in that class. [1/24/22 N.T. at 10106 (Horvath)].

1624. As Michael’s progress report from one month before graduation showed, he had the following absences for each class during his senior year: 10 absences in Chorus; eight absences in Gym; six absences in Homeroom; 27 absences in Media Studies; 22 absences in Probability and Statistics; 33 absences in Modern History; 39 absences in Law in America; and 37 absences in English. [1/24/22 N.T. at 10125-26 (Horvath); LR-00145].

1625. Michael believed that absences listed on his progress report were actually tardies that were mislabeled. He also attributed many of the absences to the following activities that he contends kept him from attending his regular classes: (1) meeting with football recruiters (this occurred 25 or more times); (2) being interviewed for a documentary about Wilkes-Barre’s football team (under 10 times); (3) meetings with guidance counselor (approximately two or three times per week); and (4) filling out college applications (greater than 20 times). [1/24/22 N.T. at 10127-30 (Horvath)].

1626. Nevertheless, and despite his spotty attendance record, Michael claims to have never skipped class as a senior. He said that skipping class would be very difficult for him because he was “the most popular kid in my school pretty much. So, if somebody saw Horvath around, it was like, where are you supposed to be, get to class.” [1/24/22 N.T. at 10131 (Horvath)].

1627. Despite testifying that he met with his guidance counselor two to three times per week during his senior year, Michael claimed that his high school needed more guidance counselors. [1/24/22 N.T. at 10131 (Horvath)].

1628. High school students in Wilkes-Barre have “tenth period”-a forty-five minute period each day where students can seek out teachers and ask questions. [1/24/22 N.T. at 10149 (Horvath)]. As Michael testified, most of his teachers were more than willing to offer help, and, in fact, many helped him even though he did not ask for help. [1/24/22 N.T. at 10150 (Horvath)].

1629. Michael has no firsthand knowledge about the quality of education that other students received at Wilkes-Barre. For example, because Michael did not take any Advanced Placement courses, he has no knowledge about the quality of education provided in those courses. [1/24/22 N.T. at 10077 (Horvath)].

1630. After high school, during the 2019 - 2020 academic year, Michael attended two semesters at Utica College in upstate New York, where he played on the school’s football team. [1/24/22 N.T. at 10033, 10032-33; 10038; 10053 (Horvath)].

1631. Michael took an academic placement test before attending Utica College but was not placed in any remedial classes during his first year. [1/24/22 N.T. at 10092-93 (Horvath)].

1632. Despite claiming that he was unprepared for college because of his education at Wilkes-Barre, Michael was in good standing during his two semesters at Utica College and earned Bs and Cs in all but one course. [1/24/22 N.T. at 10078-10080 (Horvath)]. By contrast, during his time in high school at Wilkes-Barre, Michael earned Ds in English 12, Biology II, Chemistry II, Algebra I and Algebra II. [PX-07012-00001].

1633. Michael claimed that Wilkes-Barre did not properly prepare him to use technology. [1/24/22 N.T. at 10086-90 (Horvath)]. For instance, Michael testified that he did not know how to send an email correctly when he attended college. [1/24/22 N.T. at 10044 (Horvath)].

1634. However, there is no evidence that technological deficiencies affected Michael's grades at Utica College. [1/24/22 N.T. at 10086-90 (Horvath)].

1635. Further, Michael used Snapchat, Twitter, and Instagram by no later than the 10th grade without any formal training on how to use those applications. [1/24/22 N.T. at 10118-19 (Horvath)].

1636. Michael contended that one of his main issues at Utica College was that he did not know how to use the library to conduct research. However, he stated that he did not ask college librarians for assistance in using the library because it hurt his pride to do so. [1/24/22 N.T. at 10046 (Horvath)].

1637. Writing a 25-page paper for his college English class is one of the chief hardships Michael highlighted in his testimony. [1/24/22 N.T. at 10047 (Horvath)]. However, Michael earned a B in both of his college English courses, including the course where he needed to write the 25-page paper. [1/24/22 N.T. at 10085 (Horvath); PX-04905].

1638. Michael obtained a C in his "First Year Seminar" course at Utica College. However, as he conceded, he did not find the subject matter to be challenging. [1/24/22 N.T. at 10088-89 (Horvath)].

1639. Michael was able to earn solid grades while at Utica College even though he was also a member of the football team and in a work-study program that took 20 or 25 hours a week. [1/24/22 N.T. at 10157 (Horvath)].

1640. While at Utica, Michael sometimes missed classes, was late to class, and failed to complete all of his assignments. [1/24/22 N.T. at 10156 (Horvath)].

1641. Michael left Utica for a variety of reasons. First were his grades. He felt like he could not do the coursework and got very down on himself. However, he also went through personal problems, and by the second semester, he could not play football anymore due to concussions. [1/24/22 N.T. at 10052 (Horvath)]. He also stated that two people who were close to him died while he was at Utica, and that made his second semester at Utica more challenging. [1/24/22 N.T. at 10086 (Horvath)].

1642. After leaving Utica College, Michael returned home and attended King's College in Wilkes-Barre for part of one semester. [1/24/22 N.T. at 10053 (Horvath)].

1643. Despite leaving King's College halfway through the semester, he still received a C in his chemistry course. [1/24/22 N.T. at 10095 (Horvath)]. As he conceded, he does not really know what his grades would have been like had he finished the semester at King's. [1/24/22 N.T. at 10096 (Horvath)].

1644. Many of Michael's high school classmates are still enrolled at King's and other universities. [1/24/22 N.T. at 10096 (Horvath)].

1645. Michael is currently employed full-time as a behavior trainer at the Graham Academy, a special education school for severely autistic children. He also has a part time job at Primo Hoagies. [1/24/22 N.T. at 10069-70 (Horvath)].

1646. Michael is and has been engaged in many civic activities. He participated in school board meetings when he was a student. [1/24/22 N.T. at 10154 (Horvath)]. He has given back to his community by engaging in volunteer work. [1/24/22 N.T. at 10154 (Horvath)]. He has

voted in elections and is able to engage in political discussions with his friends and family. [1/24/22 N.T. at 10154 (Horvath)].

1647. As Michael agrees, he is a productive member of society, and even though he is only 20, he is already a mentor to children. [1/24/22 N.T. at 10155 (Horvath)].

1648. To the extent the Pennsylvania Constitution creates an individual right to education, it cannot be concluded that Respondents denied or interfered with Michael's right to receive an education.

1649. To the extent the Pennsylvania Constitution creates an individual right to receive a particular level or quality of education, it cannot be concluded that Respondents denied or interfered with Michael's right to receive an adequate education.

C. S.A.

1650. At the time of his deposition, S.A. was a senior in the SDP. Upon graduation, S.A. intended to attend a culinary arts program at a trade school. S.A. had no reason to think he would not graduate from high school on time. [Parties' Joint Designations of the 7/3/2019 Deposition of S.A. (hereinafter, "S.A. Dep.") at 15:10-21].

1651. Since age 13, S.A. has desired a career as a chef or sous chef. He applied and was accepted to Mastbaum High School ("Mastbaum"), a vocational high school within the SDP, to utilize its culinary program. [S.A. Dep. at 8:18-19, 9:12-10:3, 12:3-14, 17:7-11]. S.A. liked school, particularly his culinary program at Mastbaum. [S.A. Dep. at 9:12-15]. Likewise, with one exception, he liked all of his teachers. [S.A. Dep. at 35:18-20].

1652. In Mastbaum's culinary program, S.A. learned all of the various operations within a restaurant, including basic knife skills, how to work stoves, dishwashers, and how to clean and bake. [S.A. Dep. at 10:8-19, 11:2-4].

1653. Additionally, S.A. had an opportunity to study culinary arts for three years from the 2017-18 school year through the 2019-20 school year. [PX-04512-0033 to 0038].

1654. As a student in SDP, S.A. took core courses, such as English, algebra, geometry, U.S. history, world history, African American history, biology, chemistry, and environmental science, as well as coursework in health and physical education, college and career readiness, music, and Spanish. [S.A. Dep. at 13:20-14:10, 15:1-3; PX-04512-0033 to 0041].

1655. S.A. struggled in some of his academic classes, but received various remedial supports. For instance, he was placed in smaller English and math proficiency classes comprised of about ten students from ninth grade through the middle of eleventh grade, when he was taken out of the class. S.A. was not sure why he was dropped from those classes and intended to request to be put back in them in twelfth grade. [S.A. Dep. at 32:12-33:19, 67:5-68:23, 76:3-14, 76:18-20].

1656. S.A. also took summer school classes in geometry and algebra [S.A. Dep. at 16:21-24, 60:17-61:1]. He also testified that he was able to meet with teachers during lunch or after school to receive additional help. [S.A. Dep. at 66:7-21].

1657. S.A. received regular speech and language support throughout his entire time as a student in SDP. [PX-04512-0067 to 0069].

1658. S.A. participated in the CSAP Support Program during the 2008-09 and 2011-12 school years. [PX-04512-0067].

1659. S.A. received intervention support in the form of guided reading support and small group instruction in the 2006-07 and 2008-09 school years. [PX-04512-0067].

1660. During high school, S.A. enrolled in math and English intervention and proficiency development courses. [PX-04512-0033 to 0041].

1661. S.A. frequently was absent or tardy from school. S.A.'s absences and tardiness included the following:

- a. 12th grade (2019-20 school year): absent 12 days and tardy 39 days;
- b. 11th grade (2018-19 school year): absent 15 days and tardy 105 days;
- c. 10th grade (2017-18 school year): absent 10 days and tardy 30 days;
- d. 9th grade (2016-17 school year): absent 29 days and tardy 23 days;
- e. 8th grade (2015-16 school year): absent 10.5 days;
- f. 7th grade (2014-15 school year): absent three days and tardy two days;
- g. 6th grade (2013-14 school year): absent 22 days;
- h. 5th grade (2012-13 school year): absent eight days;
- i. 4th grade (2011-12 school year): absent five days and tardy four days;
- j. 3rd grade (2010-11 school year): absent four days and tardy one day;
- k. 2nd grade (2009-10 school year): absent nine days and tardy 18 days;
- l. 1st grade (2008-09 school year): absent 17 days and tardy 29 days;
- m. Kindergarten (2007-08 school year): tardy 20 days;
- n. Kindergarten (2006-07 school year): absent seven days and tardy 19 days.

[PX-04512-0033].

1662. Combining all academic years, S.A. was absent a total of 151.5 days and was tardy a total of 290 days. [PX-04512-0033].

1663. While at Mastbaum, S.A. got a summer job at Sesame Place as a short order cook. [S.A. Dep. at 16:3-14]. S.A. learned about the summer job from the principal at Mastbaum. [S.A. Dep. at 17:14 - 18:1].

1664. The culinary arts program at Mastbaum prepared S.A. for his job at Sesame Place, and to ultimately go to a culinary trade school and succeed as a sous chef. [S.A. Dep. at 16:3-14, 56:20-57:10].

1665. S.A. is an involved citizen, spending some of his free time away from high school cooking and distributing meals for the homeless. [S.A. Dep. at 58:3-11]. He believes that when he has finished school, he will continue to give back to his community. [S.A. Dep. at 59:17-21].

1666. S.A. graduated from the SDP, and at the time of his graduation was registered to attend Walnut Hill College. [Sheila Armstrong's Responses and Objections to Senator Scarnati's First Set of Requests for Admission (Redacted version) at RFA #1].

1667. At the time of his deposition, S.A. was confident that he would be able to become a sous chef and earn a living in his desired career. [S.A. Dep. at 58:13-18].

1668. To the extent the Pennsylvania Constitution creates an individual right to education, it cannot be concluded that Respondents denied or interfered with S.A.'s right to receive an education.

1669. To the extent the Pennsylvania Constitution creates an individual right to receive a particular level or quality of education, it cannot be concluded that Respondents denied or interfered with S.A.'s right to receive an adequate education.

XI. OUTCOME MEASURES

1670. As explained in the court's conclusions of law, whether the General Assembly has met its constitutional duties under the Education Clause should be measured with reference to educational inputs rather than outputs.

1671. Student outcomes depend on and are impacted by many personal, family, and community factors. [See, e.g., LR-04192-00004; 12/2/22 N.T. at 2262-63 (Stem); 12/14/21

N.T. at 4693-94 (Barnett); [01/14/2022 N.T. at 8524-25 (Noguera)]; [2/4/22 N.T. at 12069 (Rossell)]; [1/20/22 N.T. at 9701 (Johnson)].

1672. PSSA and Keystone exam scores are “often affected by factors outside the school and are highly correlated with students’ demographics, such as socioeconomic status.” [LR-04192-00004; 12/2/22 N.T. at 2262-63 (Stem)].

1673. Poverty has large and persistent effects on student outcomes. From an outcomes perspective, by the time that students in poverty enter kindergarten, they can be 12 to 18 months behind the average child. Achievement rankings by student income tend to change little between the ages of 5 to 18. These effects are observed nationwide, not just in Pennsylvania. [12/14/21 N.T. at 4693 (Barnett)].

1674. Early differences in cognitive academic and social skills emerge from a complex set of family circumstances related to family income that include not only financial circumstances but parental education, family structure and the conditions of the neighborhood. All of these factors contribute to learning and development, with the parental capacity to combine their own time with resources to provide home experiences that support early learning being one particularly important aspect of this phenomenon. [12/14/21 N.T. at 4694 (Barnett)].

1675. Neighborhood influences other than parenting that can matter include exposure to environmental toxins, danger, violence, and emotional stress. [12/14/21 N.T. at 4694 (Barnett)].

1676. Adverse childhood experiences (“ACEs”) commonly associated with poverty can result “in harmful effects to brain functioning and impede cognitive functions causing trouble with attention, concentration, memory, and creativity.” These harmful effects can grow with increased exposure to poverty and continue into adulthood. In school settings, ACEs “make

it particularly difficult for students to focus on specific tasks, retain new class material or apply creativity in critical-thinking skills, all essential dispositions for students building higher-order thinking skills in class and preparing for meaningful work in today's economy. [01/14/2022 N.T. at 8538-40 (Noguera)].

1677. Poverty can affect neurological development, which can limit later achievement. [1/20/22 N.T. at 9701 (Johnson)]. Roughly half of the achievement gap observed in 3rd grade was already apparent at kindergarten entry. [1/20/22 N.T. at 9701 (Johnson)].

1678. Economically disadvantaged students typically score lower on standardized tests than non-economically disadvantaged students. [2/4/22 N.T. at 12069 (Rossell)].

1679. Poverty and related social conditions (such as food and home insecurity, family illness, and others) contribute to lower rates of achievement and educational attainment. Such societal conditions are problems that generally are not created by the public school system. [01/14/2022 N.T. at 8524-25 (Noguera)].

1680. "Studies of educational achievement or educational attainment consistently find that differences in family circumstances have a large influence on educational outcomes, more so than the impacts of differences among schools." [1/20/22 N.T. at 9329 (Belfield)].

1681. "More than 90 percent of a child's waking hours from birth to the age of 18 are spent outside of school in an environment that is heavily conditioned, both directly and indirectly, by families." [1/20/22 N.T. at 9331 (Belfield)].

1682. In fact, Petitioners' expert, Dr. Belfield, has gone so far as to opine that: "Both families and schools are central to obtaining strong educational results, and **the imbalance of educational policy in the direction of school reform is detrimental to improving the quality and distribution of educational outcomes.**" [1/20/22 N.T. at 9337 (Belfield) (emphasis added)].

1683. The public education system cannot control the personal, family, and community disadvantages that adversely affect students outside of school.

1684. PDE created a variety of goals in its ESSA plan. These goals include goals for test score proficiency rates, graduation rates, ELL language and attainment, and career standards benchmarks. [12/2/22 N.T. at 2251-52 (Stem)].

1685. As a general matter, the goals were developed by essentially improving every rating for every student by 50 percent in 13 years. The one exception was for English Language Attainment goals, which are more nuanced because they depend on the beginning language levels for ELL students. [12/2/22 N.T. at 2251-52 (Stem)].

1686. PDE describes its ESSA goals as ambitious. [12/2/22 N.T. at 2352 (Stem)].

1687. PDE did not discuss or consider the Pennsylvania Constitution in developing the ESSA goals. [12/2/22 N.T. at 2351 (Stem)].

A. Future Ready PA Index

1688. In preparing the ESSA plan, PDE heard from commenters that schools should be evaluated holistically based on a range of measures, not just test scores. [12/2/22 N.T. at 2283 (Stem)]. PDE developed the Future Ready PA Index, which provides a broader, holistic view of schools. [12/2/22 N.T. at 2284 (Stem)].

1689. PDE publishes the Future Ready PA Index, which provides a holistic snapshot of each public school to be used “as a tool to help inform continuous improvement and increase outcomes for all students.” [11/30/21 N.T. at 1699 (Stem)].

1690. The Future Ready PA Index was developed in consultation with hundreds of stakeholders, based on the theory that communities wanted to know more about schools than just their PSSA and Keystone scores. [11/30/21 N.T. at 1717 (Stem)]. Therefore, in addition to standardized achievement test scores, the indicators that are part of the Future Ready PA Index

include growth/PVAAS data, English language proficiency, absenteeism, career standards, high school graduation rate, an industry-based learning indicator, rigorous courses of study, and the postsecondary transition to school, work, and military. [PX-01703; 11/30/21 N.T. at 1717 (Stem)].

1691. The Future Ready PA Index also measures the percentage of students that 16 months after graduation are either enrolled in a postsecondary institution, in the workforce, or in the military. [11/30/21 N.T. at 1750 (Stem)]. As Mr. Stem acknowledged, there are some limitations for the workforce data presented in the Index because the data does not allow PDE to disaggregate by student group the way it does with other measures and because it is limited to Pennsylvania data obtained from the Department of Labor and Industry; PDE does not have data from students that are employed outside of Pennsylvania. [11/30/21 N.T. at 1752-1753 (Stem)].

B. Standardized Achievement Test Scores

1692. Pennsylvania currently administers two standardized achievement tests to the vast majority of students in the Commonwealth – the PSSA and Keystone exams. PSSA exams are administered in grades 3 to 8 in English language arts and math, and grades 4 and 8 in science. The Keystone exams are administered in algebra I, biology, and literature. They are typically administered to high school students at the end of the year when a student takes a course in algebra, biology, or literature, respectively. Students receive a proficiency score on PSSA and Keystone exams. Proficiency levels include: Below Basic – Basic – Proficient – Advanced. [11/30/21 N.T. at 1614-15 (Stem)]

1693. Pennsylvania began administering its first standardized exams to students in the 1969–1970 school year. That assessment was known as the Educational Quality Assessment (EQA). The EQA continued through the 1987–1988 school year. Along the way, in the 1984-85 school year, a testing program called Testing for Essential Learning and Literacy Skills (TELLS) was administered. [LR-04910-00012].

1694. The PSSA program was instituted in 1992. The PSSA initially measured performance in the content areas of mathematics and reading at grades 5, 8, and 11, and in writing at grades 6 and 9. In 1999, the State Board of Education adopted the Pennsylvania Academic Standards for mathematics and for reading, writing, speaking, and listening. Student proficiency levels for Advanced, Proficient, Basic, and Below Basic were defined in 2000. [LR-04910-00012].

1695. In 2003-04, Pennsylvania administered the PSSA ELA and math exam in grades 3, 5, 8, and 11. During that year, PSSA exams in the topic of writing were administered at grades 6, 9, and 11. [LR-04217-00013]. By the 2005-06 school year, PSSA exams in ELA and math were given at grades 3 to 8, and 11. [LR-04217-00014 to 00015]. PSSA exams in science were added in the 2007-08 school year. [LR-04217-00016 to 00017]. In 2013, the 11th grade PSSA exams were removed in favor of the Keystone exam, which was then administered at that grade level. [LR-04217-012]. Starting in the 2014-15 school year, the PSSA exams administered to students were aligned to the new Pennsylvania Core Standards. [LR-04217-00023 to 00024]. In 2017 and 2018, the PSSA exams were re-evaluated and reduced in length in an effort to reduce the amount of time spent on testing. [LR-04217-00012].

1696. The Keystone exams were first administered in Pennsylvania in the 2010-11 school year (but they were not administered in the 2011-12 school year). Although there were originally plans to create and administer Keystone exams in English Composition, Algebra II, Geometry, Civics and Government, Chemistry, U.S. History, and World History, those assessments have not been implemented. To date, students have only been administered the Algebra I, Biology, and Literature Keystone exams. [LR-04910-00014].

1697. Currently, a small number of special education students take the PASA exam, which is administered to students with severe special education needs. Other than the small number of students who take the PASA exam, the wide majority of special education students take the PSSA and Keystone exams. [12/13/21 N.T. at 4352-53 (Molchanow)].

1698. ELL students also take the PSSA and Keystone exams when they are in the appropriate grade or enrolled in the appropriate course. However, if the student does not speak English well, that could, and typically does, impact the students' score on the PSSA or Keystone exam. In fact, an ELL student is actually defined as a student who has a low score on an ELA exam. [12/2/21 N.T. at 2214-16 (Stem)].

i. Standardized Achievement Test Scores Should Not Be Given Special Weight

1699. If the court were to use outcome measures as part of the legal standard to be applied under the Education Clause of the Constitution (which it is not doing), the court would not place any additional weight on Pennsylvania's standardized achievement test scores over other outcome metrics related to Pennsylvania's schools.

1700. The court does not believe Pennsylvania's standardized achievement test scores should be given more weight than other metrics for several reasons. These include the following:

a. Pennsylvania's standardized achievement test scores are designed to reflect student knowledge of the academic standards adopted by the State Board. [12/13/21 N.T. at 4353-54 (Molchanow)]. As our Supreme Court has already said, "it cannot be correct that we simply constitutionalize whatever standards the General Assembly relies upon at a moment in time, and then fix those as the constitutional minimum moving forward[.]" William Penn II, 170 A.3d at 450. The court believes that adopting a constitutional standard which prominently relies

on standardized achievement test scores would be contrary to the text and reasoning of our Supreme Court’s prior decision in this case.

b. Standardized achievement test scores are affected by out-of-school factors, and are highly correlated with demographic factors such as economic disadvantage. Accordingly, an observer cannot determine whether standardized achievement test scores reflect educational practices or something else.

c. Standardized achievement test scores also reflect the design of the tests. The tests were not designed with the intent of acting as a constitutional standard.

d. Unlike high school graduation, course grades, and other measures, standardized achievement test scores typically do not have a tangible impact on students.

e. It would be incongruous for the court to place heightened importance on standardized achievement test scores, given that both PDE and the General Assembly have recently taken steps to reduce the impact of, and focus on, these test scores.

1701. Several of the superintendents from the Petitioner Districts agreed. For instance, Shenandoah Valley’s superintendent stated that he would not look at standardized achievement test scores in order to understand what impact his district is having on a student. [12/9/21 N.T. at 3592 (Waite)].

1702. In reference to scores on standardized achievement tests, Mr. Kergick, the former superintendent and official designee on behalf of Panther Valley, stated at his deposition: “Schools are unjustly critiqued, evaluated and placed in a ranking system based on a set of numbers[.]” Mr. Kergick agreed that PSSA and Keystone exam scores do not reflect the education being provided to students by Panther Valley. [Kergick Dep. 245-46].

1703. At trial, Lancaster’s superintendent, Dr. Rau, claimed to believe that schools and students should be judged by their scores on standardized achievement tests, and that growth is improper to use in evaluating a student or school. However, outside of court, Dr. Rau publicly advocated for the opposite position, stating: “I don’t believe that we can judge students based on a test that they took at one period of time. We need to be much more holistic in how we assess students and their growth over time.” [12/17/21 N.T. at 5425 (Rau)]. The court finds Dr. Rau’s out of court statement more credible than her testimony on this point.

1704. Even Petitioners’ expert, Dr. Johnson, admitted that standardized achievement “[t]est scores are imperfect measures of learning,” and that test scores can have “rather weak[]” relationships to other measures of adult success. [1/21/22 N.T. at 9867 (Johnson)].

1705. Another expert for Petitioners, Dr. Belfield, has opined that it is difficult to use test scores as an outcome measure and that there is much less evidence on the association between test scores and economic outcomes, as compared to studies related to educational attainment. [1/20/22 N.T. at 9279 (Belfield)].

1706. Likewise, Petitioners’ expert Dr. Noguera believes there is an over-reliance on standardized testing in education today. [01/13/2022 N.T. at 8397 (Noguera)]. As he agreed, a student can receive high quality opportunities and still perform poorly on a standardized test. [01/14/2022 N.T. at 8550 (Noguera)]. As he also acknowledged, it is “tricky” to assume that standardized tests are accurate, because there is no way of knowing whether, for example, students who performed poorly were tired or sick or simply did not take the test seriously. [01/14/2022 N.T. at 8552-53 (Noguera)].

1707. The State Board has never conducted a study to determine whether standardized achievement test scores are actually connected with college and career readiness. [12/13/21 N.T. at 4341-42 (Molchanow)].

1708. Putting the above-mentioned items aside, utilizing standardized achievement test scores as part of the standard to be applied under the Education Clause would be problematic for several reasons.

1709. For instance, the court would have to decide which test results should be used in the applicable legal standard because there are differences in the proficiency rates on the PSSA and Keystone exams. For instance, in 2018-19, 32.2% of 8th grade students taking the PSSA scored proficient. However, during the same year, nearly twice as many students (63.3%) taking the Keystone exam in Algebra I scored proficient. [LR-03172; PX-02060; PX-02023]. There is also a gap between proficiency levels on the PSSA ELA and Keystone Literature exams. [LR-03172; PX-02060; PX-02023].

1710. Likewise, there are differences in proficiency rates on the PSSA exam from one grade level to the next. In 2018-19, 56% of 3rd grade students taking the PSSA scored proficient, but 32.2% of 8th grade students scored proficient. [LR-03172; PX-02060; PX-02023].

1711. Similarly, on different subjects, the same group of students can have different levels of proficiency. In 2018-19, 57.9% of 8th grade students scored proficient on the ELA PSSA, but 32.2% of 8th grade students scored proficient. [LR-03172; PX-02060; PX-02023].

1712. There is no reasoned basis for the court to choose the results of one exam over another.

1713. Moreover, no evidence was introduced to show that scores at particular grade levels or on particular subject matters were the result of the allocation of funding.

ii. Standardized Achievement Test Scores are Highly Connected to Demographics

1714. PSSA and Keystone exam results are often affected by factors outside of school and are highly correlated with student demographics, such as socioeconomic status. [LR-04192-00004; 12/2/21 N.T. at 2262-63, and 2382 (Stem)].

1715. PDE differentiates between student “Achievement” and student “Growth.” As PDE explains, achievement is a snapshot of a student’s performance at a single point in time, whereas growth demonstrates a student’s relative performance against themselves (and is then aggregated into a larger group). Achievement measures refer to the PSSA and Keystone exams; growth measures refer to PVAAS scores. [LR-04192-00004; 12/2/22 N.T. at 2262-63 (Stem)].

1716. Only a portion of achievement on standardized tests is explained by schools. The remainder is explained by what goes on in the student’s home, the community the student lives in, and the student himself or herself, among other factors. [2/3/22 N.T. at 11883, 11892 (Rossell)].

1717. As Panther Valley acknowledges, student test scores on standardized achievement tests tell us more about the community that the student lives in than what the student knows. [LR-00294-015; 11/16/21 N.T. at 651 (McAndrew)].

1718. Panther Valley’s position, which is set forth in its current district-level plan, is that there are significant issues regarding standardized assessments. Notably, Panther Valley believes that standardized assessment results do not accurately reflect the capabilities of the district’s students. Rather than looking only at its assessment scores, Panther Valley believes that

it is a “terrific school district.” [LR-00241-00098 to 00100; 11/16/21 N.T. at 641-47 (McAndrew)].

1719. In a 2018 presentation to its staff, Panther Valley noted that it was unfortunate that the school was evaluated based on its standardized achievement test scores. The district informed its staff that standardized test scores do not measure a variety of important attributes, including persistence, leadership, creativity, civic-mindedness, self-discipline, reliability, motivation and resilience. [LR-00340-0017 to 00018; 11/16/21 N.T. at 652-53 (McAndrew)].

1720. Panther Valley also disseminated a newsletter reprinting an article about standardized achievement tests. According to Panther Valley’s newsletter, “research shows that the outcomes of standardized tests don’t reflect the quality of instruction as they’re intended to.”

The article in the newsletter went on to explain:

To be clear, this doesn’t mean that money determines how much students can learn. That couldn’t be further from the truth. In fact, our results demonstrate that standardized tests don’t really measure how much students learn, or how well teachers teach, or how effective school leaders lead their schools. Such tests are blunt instruments that are highly susceptible to measuring out-of-school factors.

[LR-03105-0002 to 00003; 11/16/21 N.T. at 658-59 (McAndrew)].

1721. The newsletter explained that grades are a much better indicator of what students know than standardized achievement test scores, stating:

Although there are ideological disputes about the merits of standardized test results, the science has become clear. The results suggest standardized tests results tell more about the community in which a student lives than the amount the student has learned or the academic, social, and emotional growth of the student during the school year. Although some might not want to accept it, over time, assessments by teachers are better indicators of student achievement than standardized tests. For example, high school GPA, which is

based on classroom assessments, is a better predictor of student success in the first year of college than the SAT.

[LR-03105-00003; 11/16/21 N.T. at 659-60 (McAndrew)].

1722. As an example of the relationship between out-of-school factors and student outcomes on standardized achievement test scores, it is helpful to review data from Wilkes-Barre's three former high schools: James M. Coughlin JSHS; Elmer L. Meyers JSHS; and, GAR Memorial JSHS. James M. Coughlin has notably higher proficiency rates on the Keystone Exam than the other two high schools in Wilkes Barre, even though each school is in the same school district. [LR-04233A]. Wilkes-Barre equitably distributed funding between its high schools. [1/26/22 N.T. at 11010 (Costello)]. Among the three high schools, James M. Coughlin has the lowest percentage of economically disadvantaged students. [LR-04093; LR-04099; LR-04095].

1723. PDE believes that it would be improper to review student achievement scores on their own. Rather, PDE believes that student achievement scores must be used in combination with student growth scores. [12/2/21 N.T. at 2275 (Stem)].

iii. The Design of Standardized Achievement Tests

1724. Student scores on standardized exams are significantly impacted by the construction of the test itself.

1725. In 2014-15, the State Board and PDE introduced new ELA and Math PSSA exams that were aligned with the new ELA and Math academic standards. As a result of this change in the PSSA exam, student proficiency levels dramatically decreased.

1726. During the 2013-14 school year, 74.59% of 3rd grade students scored proficient on the math PSSA exams. In 2014-15, following the change in the PSSA exam, 48.5% of 3rd grade students scored proficient. This was a drop of approximately 26.1%. [LR-03173; 12/1/21 N.T. at 2173-75 (Stem)].

1727. Likewise, during the 2013-14 school year, 73.07% of 8th grade students scored proficient on the math PSSA exams. In 2014-15, following the change in the PSSA exam, 29.8% of 8th grade students scored proficient. This was a drop of approximately 44.8%. [LR-03173; 12/1/21 N.T. at 2173-75 (Stem)].

1728. The change in proficiency rates was caused by a change in the test, as Pennsylvania transitioned to more rigorous exams aligned with more rigorous academic standards in ELA and math. [12/1/21 N.T. at 2174-75 (Stem)].

1729. In fact, when test-takers do better on a test than expected, the test designers typically renorm the exam so that it is more difficult. This has happened in Pennsylvania several times. [2/4/22 N.T. at 12064 (Rossell)].

1730. In addition to the changes to the 2014-15 exams, in 2016, the PSSA test designers saw a pattern across grades and content areas of students to be scoring higher than expected. Therefore, in the 2017, 2018, and 2019 achievement tests, the test difficulties were centered on the 2016 examinee. [LR-04217-00152]. In particular, test difficulties were “intentionally increased” to align with student performance. [LR-04217-00115].

1731. PSSA results generate a rough bell curve. [2/3/22 N.T. at 11139-40 (Rossell)]. Standardized tests are designed to create a bell curve because they are intended to differentiate students and rank order them. [2/3/22 N.T. at 11869-70 (Rossell)].

1732. PSSA scores, with respect to English learners in particular, display as a bell curve on English language arts but not on math and science, which some experts believe is a result of the archaic and difficult language that is part of math and science, which is particularly challenging for English learners to comprehend. [2/3/22 N.T. at 11847 (Rossell); LRD2-00003, LRD2-00004].

1733. Dr. Rossell observed thousands of standardized test results in 15 to 20 states and noted that they generally generate bell curves. [2/3/22 N.T. at 11850-51 (Rossell)].

1734. Using standardized test scores to evaluate the quality of education is a misuse of the data because standardized tests are designed to produce a bell curve where half of test takers score above a midpoint and half score below. [2/3/22 N.T. at 11858, 11882-83 (Rossell)].

1735. Standardized test questions are field tested with the aim of generating questions that not every student will get right or wrong. [2/3/22 N.T. at 11861-62 (Rossell)].

1736. A test development goal of the PSSA is to include a wide range of item difficulties. Items that are either very hard or very easy provide little information about student differences in achievement. [LR-04217-00113].

1737. A discriminating item on a standardized test means that the item differentiates students by some students getting the question right and other students getting the question wrong. [2/3/22 N.T. at 11872-73 (Rossell)].

1738. With regard to test construction, if too many students get a question right, the question is removed from the exam. Likewise, if too many students get a question wrong, it is removed from the exam. [2/4/22 N.T. at 12064 (Rossell)].

1739. Former Secretary of Education Carolyn Dumaesq testified in accordance with Dr. Rossell. As Secretary Dumaesq stated:

In every test, there's about 20 percent of the questions on the test that aren't counted because they're being tested to see how well they perform and that means did everybody get them wrong, okay; it was set too high or there was something wrong with the way the question was being asked; or, if everybody got it right, then it was too easy and not set appropriately.

[2/4/22 N.T. at 12062-63 (Rossell)].

1740. In addition, a question is flagged to be reviewed and potentially removed from a PSSA or Keystone exam if too many students with low test scores get it correct, as compared to students with high test scores. [LR-04217-00058].

1741. Finally, as Mr. Zeff acknowledged, it is “true” that “nationally there have been questions about standardized testing” and the NAACP historically has noted that standardized tests, generally, have involved language, concepts and examples that are not as familiar to minority and low-income children, which can make them discriminatory in nature. [01/19/2022 N.T. at 8939-40, 8944 (Zeff); LR-01578].

iv. Standardized Achievement Tests Do Not Have A Tangible Impact On Students

1742. Generally speaking, students’ scores on the PSSA and Keystone exams do not prevent a student from advancing to the next grade, graduating, or gaining admission to college.

1743. While a students’ grades (in the form of a grade point average or GPA) are typically reported when students apply for admission to colleges, PSSA and Keystone exam scores are not. [12/1/21 N.T. at 2152, 2154 (Stem)].

1744. In fact, Mr. Stem was not aware of any student being rejected from admission at a college based on the students’ PSSA or Keystone exam scores. [12/1/21 N.T. at 2152 (Stem)].

1745. Mr. Stem was also unaware of any individual being prevented from jury duty based on their PSSA or Keystone exam scores. [12/1/21 N.T. at 2149 (Stem)].

1746. A requirement that students pass their Keystone exam in order to graduate never took effect in Pennsylvania. Under Act 158, which is set to go into effect for the 2022-23 school year, students will be able to graduate while scoring Basic on some Keystone exams, or without earning a score of proficiency on any Keystone exam. [12/1/21 N.T. at 2160-61 (Stem)].

1747. Educators have informed PDE of concerns that if students believe that poor PSSA or Keystone exam scores will not have a negative impact on the student, the students may not try their best on the PSSA or Keystone exams. [12/1/21 N.T. at 2159-60 (Stem)].

1748. As explained by Panther Valley's former superintendent and official designee, there are students in every school district in the Commonwealth that do not try to do their best on PSSA and Keystone exams. [Kergick Dep. 233]

1749. Generally speaking, PSSA and Keystone exam scores do not prevent students from advancing from one grade to another, or from graduating. Likewise, PSSA and Keystone exam scores do not impact students' grades. [See, e.g., 11/16/21 N.T. at 637-38 (McAndrew)].

v. The Prominence Of Standardized Achievement Tests Has Been Lessened

1750. Over the last several years, regulatory, statutory, and policy changes have decreased the prominence of standardized achievement test scores.

1751. One major aspect of PDE's ESSA plan is that PDE is moving away from an over-reliance on using student test scores. [12/2/22 N.T. at 2283 (Stem)].

1752. In preparing the ESSA plan, PDE heard from participants that testing time should be reduced and that student test scores should be less important for teacher evaluations. PDE also heard that school evaluations should be holistic, not based only on test scores. [12/2/22 N.T. at 2283 (Stem)]

1753. And, in fact, testing time for Pennsylvania students was reduced, the system of teacher evaluations was changed by the General Assembly to make it less dependent on student test scores, and PDE developed the Future Ready PA Index. [12/2/22 N.T. at 2284 (Stem)].

1754. The State Board has supported efforts to reduce the amount of time that students spending taking standardized achievement tests. [12/13/21 N.T. at 4348 (Molchanow)].

C. Academic Growth

1755. As a general matter, growth is essentially determined by comparing students' most recent scores on an achievement exam (such as a PSSA) with the same students' prior scores on the achievement exam. [LR-04192-00004; 12/2/22 N.T. at 2265 (Stem)].

1756. Pennsylvania's measure of student academic growth is referred to as PVAAS. PVAAS provides analyses based on existing student assessment data. PVAAS measures student growth from one year to the next and reports whether a group of students maintained, exceeded, or fell short of the growth standard based on their prior testing history. [PX-08073-0001].

1757. As PDE notes, PVAAS results "let us see even very subtle changes that have occurred with student academic performance. Low performing students may not have yet reached proficient, but the school may have been highly effective in making growth with those students; PVAAS will let the schools see those results." [PX-08073-0004].

1758. PVAAS growth measures are reliable. In fact, as acknowledged by PDE, multiyear measures from the PVAAS approach are among the most reliable models because they use so much testing history for each student. [PX-08073-0007]. PVAAS utilizes all available testing history for each student. [PX-08073-0008].

1759. PVAAS data is reported in two ways. First, PVAAS data is reported as the "Growth Measure." According to PDE, it is not appropriate to compare the "Growth Measure" values from the District and School PVAAS reports as they fail to consider the different standard errors of each district and school. [PX-08073-0004]. In addition, PVAAS data is reported as an

average growth index (“AGI”). According to PDE, the appropriate measure to compare the growth of districts and schools is through the AGI for each district or school. [PX-08073-0005].

1760. The AGI is also color-coded. The colors for the PVAAS AGI are red, yellow, green, light blue, and dark blue. Red means that there is significant evidence that the student cohort did not meet the growth standard. Yellow means there is moderate evidence that the students did not meet the growth standard. Green means there is some evidence that they met the growth standard. Light blue means there is moderate evidence that the students exceeded the growth standard. Dark blue means there is significant evidence that the students exceeded the growth standard. [LR-01979; 12/2/22 N.T. at 2281 (Stem)].

1761. A PVAAS score of green is equivalent to having one year of growth during the course of a year. [LR-01443]

1762. PVAAS scores represent a statistical analysis designed to measure a district’s, school’s, or teacher’s influence on the academic progress rates of groups of students from year to year. [PX-08073-0001]. In particular, PVAAS data offers an objective, accurate way to measure student growth and, relative to other outcome measures, is a better way to measure the influence that Pennsylvania’s public districts, schools, and teachers have on students’ educational experiences. [PX-08073-0001].

1763. While PSSA and Keystone scores are “often affected by factors outside the school,” PVAAS scores are “dependent upon what happened as a result of schooling.” [LR-04192-00004; 12/2/22 N.T. at 2265 (Stem)]. PVAAS scores “measure the impact of educational practices, classroom curricula, instructional methods, and professional learning on student achievement.” [LR-04192-00005; 12/2/22 N.T. at 2270 (Stem)].

1764. In contrast with standardized achievement test scores, PVAAS and similar value-added measures “can remove the effects of factors not under the control of the school.” [PX-08073-0002].

1765. PVAAS controls for variables that help to narrow down the impact of teaching in ways that achievement alone cannot. Therefore, PVAAS is a better measure of the impact of a school on a student than achievement scores. [12/2/22 N.T. at 2270-2271 (Stem)].

1766. Growth measures rely on students’ prior testing history in an effort to isolate school level contributions to student learning. [PX-01838-0051].

1767. Under its ESSA plan, PDE used the average growth index (“AGI”) as its growth measure. The AGI is the proper measure to use when comparing school districts. [12/2/22 N.T. at 2277 (Stem)].

1768. Panther Valley’s viewpoint is that PVAAS data represents “the best example of measuring learning[.]” [Kergick Dep. Pg. 409].

1769. As Ms. Kobal, a teacher from Greater Johnstown, stated, you cannot look at test score data for students at Greater Johnstown and evaluate how good of a job Greater Johnstown is doing in educating its students. Ms. Kobal testified that “[g]rowth gives a better picture of how they’re doing throughout the school year.” Accordingly, she agreed you can look at growth data and determine how well Greater Johnstown is doing in teaching its students. [12/8/21 N.T. at 3352 (Kobal)].

1770. Mr. Lopez from Lancaster testified that it is not fair to evaluate teachers based on the standardized test scores that their students earn. However, he stated that growth levels the playing field for Lancaster’s students and staff. Accordingly, Mr. Lopez believes that PVAAS

scores are a more equitable way of evaluating whether a teacher is doing a good job than achievement scores. [Lopez Dep. Pgs. 75-76].

1771. In presenting to the Wilkes-Barre school board, Dr. Costello contrasted the school district's achievement scores with its PVAAS growth scores. In particular, after noting the districts proficiency levels, Dr. Costello stated:

When you look at growth, we see a different picture. The State growth average for English/Language Arts was 75. We had a growth score of 85. When looking at this together, although our proficiency is still lagging behind other Districts, we are showing growth. This will eventually lead to increased levels of proficiency. Our students will be gaining ground and not lagging or falling behind. We are making strides to achieve these State standards.

[LR-01086].

1772. William Penn created presentations to celebrate its teachers who had students who met or exceeded PVAAS growth expectations. [LR-01443].

1773. As Petitioners' expert Dr. Belfield stated in his book, "Economic Principles for Education," "Value added academic scores should be used to take account of family background and intake characteristics[.]" [1/20/22 N.T. at 9280 (Belfield)].

1774. As Dr. Hanushek explained, "Value-Added Models attempt to separate out the independent influence of teachers and schools from the influence of parents and neighborhoods and peers in the schools." [02/17/2022 N.T. at 14280 (Hanushek)].

D. Petitioner Districts Do Relatively Well On Growth

1775. Many of the Petitioner Districts do quite well based on their PVAAS scores.

1776. For instance, at the district-wide level in Wilkes-Barre, between 2016-17 and 2018-19, 20 out of 31 reported student group met or exceeded the PSSA PVAAS growth standard. [LR-05072A]. On the same measure and time frame, 21 out of 31 student groups in Panther Valley met or exceeded the PSSA PVAAS growth standard. [LR-05034A]. Similarly, in

SDP, 23 out of 31 student groups met or exceeded the PSSA PVAAS growth standard over the same time frame. [LR-05045A].

1777. In addition, PVAAS scores are available for particular student sub-groups, such as economically-disadvantaged students, ELL students, and special education students. At many of the Petitioner Districts, the students in these subgroups have strong growth scores.

1778. In Greater Johnstown, the following percentages represent the portion of students in particular sub-groups who met or exceeded the PVAAS growth measure using across grade level numbers:

a. Economically-disadvantaged students: 8 of 12 (67%) student groups met or exceeded the growth measure [LR-05014A].

b. Special education students: 9 of 11 (82%) student groups met or exceeded the growth measure [LR-05015A].

c. African American students: 9 of 12 (75%) student groups met or exceeded the growth measure. [LR-05011A].

1779. In Lancaster, the following percentages represent the portion of students in particular sub-groups who met or exceeded the PVAAS growth measure using across grade level numbers:

a. Economically-disadvantaged students: 36 of 68 (53%) student groups met or exceeded the growth measure [LR-05022A].

b. ELL students: 21 of 32 (66%) student groups met or exceeded the growth measure [LR-05023A].

c. Hispanic students: 39 of 68 (57%) student groups met or exceeded the growth measure [LR-05024A].

d. Special education students: 34 of 47 (72%) student groups met or exceeded the growth measure [LR-05025A].

1780. In Panther Valley, the following percentages represent the portion of students in particular sub-groups who met or exceeded the PVAAS growth measure using across grade level numbers:

a. Economically-disadvantaged students: 6 of 8 (75%) student groups met or exceeded the growth measure [LR-05035A].

b. Special education students: 6 of 8 (75%) student groups met or exceeded the growth measure [LR-05036A].

1781. In Shenandoah Valley, the following percentages represent the portion of students in particular sub-groups who met or exceeded the PVAAS growth measure using across grade level numbers:

a. Economically-disadvantaged students: 3 of 8 (38%) student groups met or exceeded the growth measure [LR-05056A].

b. ELL students: 4 of 5 (80%) student groups met or exceeded the growth measure [LR-05057A].

c. Hispanic students: 5 of 8 (63%) student groups met or exceeded the growth measure [LR-05058A].

d. Special education students: 5 of 7 (71%) student groups met or exceeded the growth measure [LR-05059A].

1782. In Wilkes-Barre, the following percentages represent the portion of students in particular sub-groups who met or exceeded the PVAAS growth measure using across grade level numbers:

a. Economically-disadvantaged students: 22 of 32 (69%) student groups met or exceeded the growth measure [LR-05073A].

b. ELL students: 10 of 12 (83%) student groups met or exceeded the growth measure [LR-05074A].

c. Special education students: 28 of 32 (88%) student groups met or exceeded the growth measure [LR-05076A].

d. African American students: 24 of 28 (86%) student groups met or exceeded the growth measure [LR-05070A].

e. Hispanic students: 28 of 32 (88%) student groups met or exceeded the growth measure [LR-05075A].

1783. In William Penn, the following percentages represent the portion of students in particular sub-groups who met or exceeded the PVAAS growth measure using across grade level numbers:

a. Economically-disadvantaged students: 21 of 36 (58%) student groups met or exceeded the growth measure [LR-05086A].

b. ELL students: 7 of 8 (88%) student groups met or exceeded the growth measure [LR-05087A].

c. Special education students: 15 of 18 (83%) student groups met or exceeded the growth measure [LR-05088A].

1784. Although the court is not employing outcome measures in the standard to be applied in this case, the court finds that a school district's growth scores are a better indication of how well a school is doing in educating its students than standardized achievement test scores.

The PVAAS growth scores set forth above show that the Petitioner Districts are providing a quality education to their students.

XII. OTHER OUTCOME AND FUTURE READY PA INDEX MEASURES

A. Graduation Rates

1785. Pennsylvania's high school graduation rates are above the national average. [12/2/21 N.T. at 2424 (Stem)].

1786. Pennsylvania reports graduation rates based on four-year, five-year, and six-year student cohorts. These graduation cohorts are based on when students started ninth grade. From the time that a student enters ninth grade, four-year cohorts are based on students who graduate from high school within four years. The five-year cohort is comprised of students who graduate from high school within five years. The six-year cohort is comprised of students who graduate from high school within six years. [12/2/21 N.T. at 2285-86 (Stem)].

1787. At times, special education students may continue with high school for longer than four years. The decision regarding how long a special education student should continue in high is based on the students' particular needs, the decision of the students' IEP team, and the best interest of the student. [12/2/21 N.T. at 2287 (Stem)].

1788. As PDE recognizes, there are benefits to students if they graduate in the five-year cohort. Moreover, as PDE acknowledges, it is very important to report and consider five-year cohort graduation data because schools should be recognized for, and encouraged in, their efforts to continue to help students to graduate even if it takes an additional year to do so. [12/2/21 N.T. at 2287-88, 2294-95 (Stem)].

1789. Pennsylvania law gives students the right to attend public education until they are 21 years old. [24 P.S. § 13-1301].

1790. Petitioner's expert, Dr. Belfield, equates graduating from high school with receiving an adequate education. His expert report defines an inadequate education system as one in which too few students graduate from high school. [1/19/22 N.T. at 9092 (Belfield)].

1791. If a student graduates in the five-year or six-year cohort, they are still considered to be a high school graduate. Graduating from high school in any amount of time allows a student to realize the same human capital and non-cognitive skills as another graduate. [1/20/22 N.T. at 9250-51 (Belfield)].

1792. Over the past ten years, the graduation rates for most, if not all, student groups have improved. [12/2/21 N.T. at 2291 (Stem)].

1793. In 2019-20, the four-year cohort graduation rate for all students in Pennsylvania was 87.36%. This is the Commonwealth's highest reported graduation rate in the past ten years, which is the full extent of publicly-available information from PDE. Between the 2010-11 and 2019-20 school years, there was a 4.73% increase in the four-year cohort graduation rates among all Pennsylvania students. [LR-05039A].

1794. Petitioners' expert, Dr. Belfield, testified that the 4.73% increase in graduation rates is expected to have a "very significant positive impact on Pennsylvania's finances." [1/20/22 N.T. at 9255-56 (Belfield)].

1795. In 2019-20, the five-year cohort graduation rate for all students in Pennsylvania was 89.52%. This is the Commonwealth's highest reported five-year cohort graduation rate in the past nine years, which is the full extent of publicly-available information from PDE. Between the 2011-12 and 2019-20 school years, there was a 6.16% increase in the five-year cohort graduation rates among all Pennsylvania students. [LR-05039A].

1796. In 2019-20, the six-year cohort graduation rate for all students in Pennsylvania was 89.86%. This is the Commonwealth's second highest reported six-year cohort graduation rate in the past eight years, which is the full extent of publicly-available information from PDE. Between the 2012-13 and 2019-20 school years, there was a 6.53% increase in the six-year cohort graduation rates among all Pennsylvania students. [LR-05039A].

1797. In 2019-20, the four-year cohort graduation rate for economically-disadvantaged students in Pennsylvania was 79.60%. This is the Commonwealth's third-highest reported graduation rate in the past ten years. Between the 2010-11 and 2019-20 school years, there was an 8.30% increase in the four-year cohort graduation rates among economically-disadvantaged Pennsylvania students. [LR-05039A].

1798. In 2019-20, the five-year cohort graduation rate for economically-disadvantaged students in Pennsylvania was 85.25%. This is the Commonwealth's highest reported graduation rate in the past nine years. Between the 2011-12 and 2019-20 school years, there was a 12.58% increase in the five-year cohort graduation rates among economically-disadvantaged Pennsylvania students. [LR-05039A].

1799. In 2019-20, the four-year cohort graduation rate for English language learner students in Pennsylvania was 68.99%. This is the Commonwealth's highest reported graduation rate in the past ten years. Between the 2010-11 and 2019-20 school years, there was a 5.99% increase in the four-year cohort graduation rates among English language learner students in Pennsylvania. [LR-05039A].

1800. In 2019-20, the five-year cohort graduation rate for English language learner students in Pennsylvania was 76.04%. This is the Commonwealth's highest reported graduation rate in the past nine years. Between the 2011-12 and 2019-20 school years, there was

a 9.96% increase in the five-year cohort graduation rates among English language learner students in Pennsylvania. [LR-05039A].

1801. In 2019-20, the four-year cohort graduation rate for special education students in Pennsylvania was 72.82%. This is the Commonwealth's fourth-highest reported graduation rate in the past ten years. Between the 2010-11 and 2019-20 school years, there was a 1.80% increase in the four-year cohort graduation rates among special education students in Pennsylvania. [LR-05039A].

1802. In 2019-20, the five-year cohort graduation rate for special education students in Pennsylvania was 77.70%. This is the Commonwealth's fourth-highest reported graduation rate in the past nine years. Between the 2011-12 and 2019-20 school years, there was a 5.14% increase in the five-year cohort graduation rates among special education students in Pennsylvania. [LR-05039A].

1803. A substantial majority of PARSS member school districts have higher graduation rates than the Commonwealth as a whole. In 2019-20, 157 out of 177 PARSS member districts (88.7%) had a higher four-year cohort graduation rate than the Commonwealth as a whole. In fact, in 2019-20, 69.5% of PARSS member districts had a four-year cohort graduation rate that was over 90%. In 2019-20, the median four-year cohort graduation rate among PARSS member school districts was 92.3%. Between 2016-17 and 2019-20, PARSS member school districts' four-year cohort graduation rates have been consistently higher than the graduation rate for the Commonwealth as a whole. [LR-05037].

1804. The five-year and six-year cohort graduation rates for PARSS member school districts' have also been higher than the graduation rates for those cohorts across the Commonwealth. In 2019-20, 155 out of 177 PARSS member districts (87.6%) had a higher five-

year cohort graduation rate than the Commonwealth as a whole. In fact, in 2019-20, 70.1% of PARSS member districts had a five-year cohort graduation rate that was over 92%. In 2019-20, the median five-year cohort graduation rate among PARSS member school districts was 94.1%. [LR-05037].

1805. Among the Petitioner Districts, there is no clear pattern of noticeably low graduation rates.

1806. With regard to the four-year cohort graduation rate, the students at the Petitioner Districts graduated in 2019-20 at the following rates:

- a. Greater Johnstown: 77.27%
- b. Lancaster: 78.64%
- c. Panther Valley: 81.52%
- d. Shenandoah Valley: 87.18%
- e. Wilkes-Barre: 83.27%
- f. William Penn: 77.92%

[LR-05007A-03; LR-05017A-03; LR-05029A-03; LR-05050A-03; LR-05069A-03; LR-05080A-03].

1807. Over the past five years (2015-16 to 2019-20) the four-year cohort graduation rates for students at the Petitioner Districts have landed in the following ranges:

- a. Greater Johnstown: 77.27 to 86.43%
- b. Lancaster: 77.37 to 84.06%
- c. Panther Valley: 73.27 to 84.85%
- d. Shenandoah Valley: 82.83 to 88.24%
- e. Wilkes-Barre: 83.27 to 87.68%

- f. William Penn: 73.21 to 77.92%

[LR-05007A-03; LR-05017A-03; LR-05029A-03; LR-05050A-03; LR-05069A-03; LR-05080A-03].

1808. With regard to the five-year cohort graduation rate, the students at the Petitioner Districts graduated in 2019-20 at the following rates:

- a. Greater Johnstown: 83.41%
- b. Lancaster: 83.65%
- c. Panther Valley: 85.09%
- d. Shenandoah Valley: 87%
- e. Wilkes-Barre: 85.4%
- f. William Penn: 79.35%

[LR-05007A-03; LR-05017A-03; LR-05029A-03; LR-05050A-03; LR-05069A-03; LR-05080A-03].

1809. Over the past five years (2015-16 to 2019-20) the five-year cohort graduation rates for students at the Petitioner Districts have landed in the following ranges:

- a. Greater Johnstown: 80.51 to 91.9%
- b. Lancaster: 83.12 to 87.47%
- c. Panther Valley: 73.87 to 86.92%
- d. Shenandoah Valley: 79.27 to 89.41%
- e. Wilkes-Barre: 85.4 to 89.81%
- f. William Penn: 77.37 to 83.16%

[05007A-03; 05017A-03; 05029A-03; 05050A-03; 05069A-03; 05080A-03].

1810. As PDE acknowledges, graduation rates are an important data point for assessing educational outcomes. [12/2/21 N.T. at 2289 (Stem)].

1811. Under its ESSA Plan, PDE set statewide goals for four-year and five-year cohort graduation rates for all Pennsylvania students and particular subgroups. In addition, the ESSA plan set interim targets based on the progression of all students and student sub-groups toward the ESSA goals. [PX-01830-0168 to 0169].

1812. As noted, PDE believes that its ESSA goals are ambitious. [12/2/21 N.T. at 2352 (Stem)]. In fact, PDE set more rigorous goals for its students who had lower levels of achievement in 2017, which includes economically-disadvantaged students. [11/30/21 N.T. at 1827 (Stem)].

1813. Based on the most recent graduation rate data available (from the 2019-20 school year), Pennsylvania students are, overall, on track to meet PDE's ambitious ESSA goals for graduation.

1814. In particular, in 2019-20, the group of all students in Pennsylvania met and exceeded its ESSA four-year cohort graduation rate interim target for 2019-20. In fact, the student class of 2019-20 met its ESSA interim target for the 2020-21 school year (a year ahead of schedule). [12/2/21 N.T. at 2293 (Stem); LR-05039A; PX-01830-0168].

1815. In 2019-20, economically-disadvantaged students in Pennsylvania met and exceeded their ESSA four-year cohort graduation rate interim target for 2019-20. In fact, the economically-disadvantaged students who graduated in 2019-20 met their ESSA interim target for the 2020-21 school year (a year ahead of schedule). [12/2/21 N.T. at 2294 (Stem); LR-05039A; PX-01830-00168].

1816. Similarly, in 2019-20, economically-disadvantaged students in Pennsylvania met and exceeded their ESSA five-year cohort graduation rate interim target for 2019-20. The five-year cohort of economically-disadvantaged students who graduated in 2019-20 met their ESSA interim target for the 2023-24 school year (four years ahead of schedule). [12/2/21 N.T. at 2295 (Stem); LR-05039A; PX-01830-00169].

1817. In 2019-20, English language learner students in Pennsylvania met and exceeded their ESSA four-year cohort graduation rate interim target for 2019-20. In fact, English language learners in Pennsylvania who graduated in 2019-20 met their ESSA interim target for the 2020-21 school year (a year ahead of schedule). [12/2/21 N.T. at 2293 (Stem); LR-05039A; PX-01830-00168].

1818. Similarly, in 2019-20, English language learner students in Pennsylvania met and exceeded their ESSA five-year cohort graduation rate interim target. The five-year cohort of English language learner students who graduated in 2019-20 met their ESSA interim target for the 2021-22 school year (two years ahead of schedule). [12/2/21 N.T. at 2295 (Stem); LR-05039A; PX-01830-00169].

1819. Other student subgroups in Pennsylvania are also exceeding their four-year cohort graduation rate interim target. For instance, in 2019-20, African-American, Hispanic, and white students all met their interim targets. [PX-01992; PX-01830-00168]

1820. Former PDE Deputy Secretary Stem testified that PDE projects that graduation rates may decrease during the 2022-23 school year following the implementation of Act 158. However, it is not known whether PDE's prediction will be accurate, or how much graduation rates will decrease, if at all. [11/30/21 N.T. at 1644-47 (Stem)].

1821. There is no bright line test that can be applied to graduation rates (or other outcome metrics) to determine whether a school district or LEA is providing adequate educational opportunities to its students. And the Court cannot assess future graduation rates of students under a law that has not yet been implemented. [24 P.S. § 1-121].

1822. Mr. Stem’s prediction about the impact of a change in law on future graduation rates reinforces the difficulty in using outcome measures to assess the opportunities provided by the school districts across the Commonwealth. [11/30/21 N.T. at 1644-47 (Stem)]. The law is designed to provide multiple pathways and standards for students to graduate; it does not directly impact the education being provided to students. [24 P.S. § 1-121; PX-00059]. Similar to the change in the PSSA exams during the 2014-15 school year, Act 158’s potential impacts on graduation rates help to illustrate one of the reasons why our Supreme Court warned that “it cannot be correct that we simply constitutionalize whatever standards the General Assembly relies upon at a moment in time, and then fix those as the constitutional minimum moving forward[.]” [*William Penn II*, 170 A.3d at 450].

B. Grades

1823. PDE does not track student grades. However, PDE believes that student grades are important and a helpful indicator of whether a student is succeeding in their education. [12/2/21 N.T. at 2285 (Stem)].

1824. While PDE does not track grade data, Greater Johnstown, Lancaster, Panther Valley, Shenandoah Valley, and Wilkes-Barre produced grade data in this case. This grade data is summarized at LR-05091. The summary exhibit tracks traditional student letter grades (A, B, C, D, or F) and omits non-traditional student grades (such as S, U, CP, NG, IP, M, etc.). As the summary exhibit shows, during both the 2017-2018 and 2018-2019 school years, at

least 69.8% of high school student grades at the five districts were a C or above, with many schools or districts exceeding that percentage. [LR-05091-00002 to 00009].

1825. In 2018-19, at Greater Johnstown, 69.8% of high school student grades were a C or above. 20.7% of high school student grades were an A, 27% were a B, and 22.1% were a C. The breakdown of high school grades in 2017-2018 was similar. In that year, 72.7% of high school student grades were a C or above. [LR-05091-00002].

1826. In 2018-19, at Greater Johnstown, 87.1% of middle school student grades were a C or above. 54.9% of middle school student grades were an A, 20.6% were a B, and 11.6% were a C. [LR-05091-00002].

1827. In 2018-19, at Lancaster, 73.2% of all student grades were a C or above. 24.8% of all student grades were an A, 26.6% were a B, and 21.8% were a C. The breakdown of high school grades in 2017-2018 was similar. In that year, 74.4% of all student grades were a C or above. [LR-05091-00003 to 00005].

1828. In 2018-19, at Panther Valley, 84.3% of high school student grades in the fourth quarter marking period were a C or above. 50.2% of grades were an A, 21.5% were a B, and 12.6% were a C. The breakdown of fourth quarter high school grades in 2017-2018 was similar. In that year, 82.2% of fourth quarter high school student grades were a C or above. [LR-05091-00006 to 00007].

1829. In 2018-2019, at Panther Valley, 86.8% of intermediate school fourth quarter student grades were a C or above. 28.7% of grades were an A, 34.4% were a B, and 23.7% were a C. The breakdown of fourth quarter intermediate school grades in 2017-2018 was similar. In that year, 88.6% of intermediate school fourth quarter student grades were a C or above. [LR-05091-00006 to 00007].

1830. In 2018-19, at Shenandoah Valley, 80% of middle school/high school grades were a C or above. 47% of middle school/high school grades were an A, 20% were a B, and 13% were a C. The breakdown of grades in 2017-2018 was similar. In that year, 81% of middle school/high school grades were a C or above. [LR-05091-00008].

1831. In 2018-19, at Shenandoah Valley, 94% of elementary school grades were a C or above. 71% of elementary school grades were an A, 16% were a B, and 7% were a C. The breakdown of grades in 2017-2018 was similar. In that year, 97% of elementary school grades were a C or above. [LR-05091-00008].

1832. In the 2018-2019 school year, Wilkes Barre reported year-end grades for students in Grade 12. 81.39% of these grades were a C or above. 36.58% of these grades were an A, 27.32% were a B, and 17.49% were a C. [LR-05091-00009].

C. Career Standards Benchmark

1833. PDE reports a career standards benchmark for all schools in its Future Ready PA Index. This is a calculation of students' career readiness experiences in the school. [PX-01703-0015].

1834. The purpose of the career standards benchmark is to highlight how well schools help students explore career opportunities and develop career goals throughout their schooling. PDE believes that the career standards benchmark accomplishes this goal. [12/2/21 N.T. at 2295-96 (Stem); PX-01830-00054]

1835. In 2018-19, the Petitioner Districts had the following percentages of students who met the career standards benchmark:

- a. Greater Johnstown: 93.14%
- b. Lancaster: 96.38%
- c. Panther Valley: 88.21%

- d. Shenandoah Valley: 98.26%
- e. Wilkes-Barre: 97.57%
- f. William Penn: 74.98%

[LR-05007A-013; LR-05017A-013; LR-05029A-013; LR-05050A-013; LR-05069A-013; LR-05080A-013].

D. Rigorous Courses Of Study

1836. PDE reports a “Rigorous Courses of Study” indicator on the Future Ready PA Index. This indicator represents the percentage of 12th grade students who participated in at least one AP, international baccalaureate, or dual enrollment course, or was a concentrator in a CTE program of study. Students are counted once, even if they completed multiple rigorous courses of study. [PX-01703-0023 to 0024].

1837. According to Petitioners’ expert, Dr. Kelly, the average percentage of students enrolled in rigorous courses of study is 57.5%. Dr. Kelly’s analysis shows that the poorest quintile is approximately 54.06%, which is only slightly below the average for Pennsylvania. Notably, in the second poorest quintile of school districts, 62.21% of students were enrolled in rigorous courses of study, which is above average for Pennsylvania in 2018-19. [See, e.g., LR-01750-00009 (showing statewide average); PD-00003-0073].

E. Secondary Transition to School, Military or Work

1838. PDE reports a “Postsecondary Transition to School, Military, or Work” indicator on the Future Ready PA Index. This indicator represents the percentage of high school graduates who are shown as enrolling in college or postsecondary studies on the National Student Clearinghouse database, enlisting in the military as determined from the Defense Manpower Data Center database, or entering the workforce as determined from the Pennsylvania Department of Labor and Industries Data Mart database. [PX-01703-0026 to 0027].

1839. The court recognizes that PDE’s “Postsecondary Transition to School, Military, or Work” indicator is not complete. For instance, workforce data does not reflect individuals who are self-employed, employed in certain family-owned businesses, or employed outside of the Commonwealth. [PX-1703-0027].

1840. Likewise, data from the National Student Clearinghouse undercounts students enrolled in post-secondary institutions – and disproportionately undercounts economically-disadvantaged students and minority students, as compared to students who are not economically-disadvantaged or minorities. [See generally 01/18/2022 N.T. at 8755-70 (Ortega)].

1841. Based on data presented by Petitioners’ expert, Dr. Kelly, the statewide average for the “Postsecondary Transition to School, Military, or Work” indicator is 82.8%. Dr. Kelly’s analysis shows that, in the poorest quintile, the “Postsecondary Transition to School, Military, or Work” indicator is approximately 77.57%. The “Postsecondary Transition to School, Military, or Work” indicator for the second poorest quintile of school districts was 79.58%. [PD-00003-0073].

F. Attendance

1842. It is axiomatic that if a student is not in school, they are not there to learn. [12/2/21 N.T. at 2300 (Stem)].

1843. Chronically absent students are at a higher risk of not achieving academic proficiency and are otherwise at risk of being in an unsafe or unhealthy situation outside of school. [12/2/21 N.T. at 2298 (Stem)].

1844. As stated by Otto-Eldred, “[r]egular school attendance is essential for successful student achievement. . . . Prospective employers are often as interested in attendance data as they are in grades of those they are about to hire. Regular attendance certainly relates to

the students reliability and dependability, two important traits.” [12/22/2021 N.T. at 6479 (Splain); LR-03240-00007].

1845. PDE maintains and reports an attendance measure referred to as “regular attendance,” on the Future Ready PA Index. “Regular attendance” and “chronic absenteeism” are the inverse of each other. Chronically or habitually absent students are students who miss 10% or more of the days that they are enrolled in school. PDE’s “regular attendance” measure refers to the percentage of students who attend school 90% of the time. Accordingly, if a student is enrolled for a full school year (approximately 180 days), the student would be habitually absent if he or she missed 18 or more days of school. In contrast, if the student missed 17 or fewer days, the student would be included in the group of students considered to regularly attend school. The measure does not distinguish between excused and unexcused absences. [PX-01703-0013; 12/2/21 N.T. at 2297-2301 (Stem)].

1846. For instance, in 2016-17, Individual Petitioner S.A., was enrolled in school for 181 days and was absent for 29 of those days (16%). Likewise, in 2013-14, S.A. was enrolled for 181 days and was absent for 22 of those days (12.2%). For both of those school years, S.A. was considered habitually absent. [PX-04512-0033]. In fact, according to S.A.’s high school records, he was enrolled in high school for 658 days and was absent for 66 of those days (10%). [PX-04512-0033].

1847. According to Petitioners’ expert, Dr. Kelly, lower wealth school districts have lower levels of regular attendance. In other words, according to Dr. Kelly, lower wealth school districts have more students who are habitually absent from school. [PD-00003-0072, 0089].

1848. If a student is chronically absent, the students' scores on standardized exams are still reported as part of the outcome measures for a school or school district. [12/2/21 N.T. at 2297-2301 (Stem)].

1849. In 2018-19, the Petitioner Districts and SDP had the following percentages of students who regularly attended school:

- a. Greater Johnstown: 71.91%
- b. Lancaster: 77.61%
- c. Panther Valley: 82.83%
- d. SDP: 75.53%
- e. Shenandoah Valley: 78.46%
- f. Wilkes-Barre: 73.69%
- g. William Penn: 73.76%

[LR-05007A-013; LR-05017A-013; LR-05029A-013; LR-05043A-09; LR-05050A-013; LR-05069A-013; LR-05080A-013].

1850. In other words, at Panther Valley, which had the highest rate of regular attendance among the Petitioner Districts and SDP, more than 17% of students missed at least 10% of days they were enrolled in school. At Greater Johnstown, more than 28% of students missed at least 10% of days they were enrolled in school.

1851. It would be inappropriate to evaluate the educational opportunities available from a school district based on the outcomes of students who do not regularly attend school.

XIII. PRE-K OPPORTUNITIES

A. Petitioners' Witnesses

1852. Petitioners presented the testimony of Dr. Steven Barnett as an expert witness regarding the benefits of early childhood education. Dr. Barnett is senior co-director of the

National Institute for Early Education Research and Board of Governors professor of education in the Graduate School of Education at Rutgers University. [12/13/21 N.T. at 4479 (Barnett)].

1853. Petitioners also presented the testimony of Tracey Campanini. Ms. Campanini is the Deputy Secretary at the Office of Child Development and Early Learning (“OCDEL”), which is a joint office between the Department of Human Services and PDE. [12/14/21 N.T. at 4728 (Campanini)]. OCDEL supports early intervention programs, manages state pre-k investments and all other services authorized under the federal Child Care Development Block Grant. [12/14/21 N.T. at 4729 (Campanini)]. OCDEL is also the lead agency for administering assistance for developmental delays for special needs, which is available to children from birth. [12/16/21 N.T. at 4961 (Campanini)].

1854. Ms. Campanini has worked in the field of education for more than 30 years. From 2016-19, she was OCDEL’s chief of staff, and prior to that, she worked for four years as the director of the Bureau of Early Learning Services. [12/14/21 N.T. at 4731-32 (Campanini)].

B. State-Funded Pre-K Education in Pennsylvania

1855. Pennsylvania school districts are not required by state law to provide pre-K education. A school district may opt to do so.

1856. In the 2019-20 school year, Pennsylvania provided approximately \$333 million in funding for pre-K programs, which represents a 12% increase from the previous year. [12/14/21 N.T. at 4695-4696 (Barnett)]. Pennsylvania ranks 13th in the country in state spending per student on pre-K programs. [12/14/21 N.T. at 4696 (Barnett)].

1857. From 2015 to 2019, Pennsylvania’s funding of pre-K programs increased by \$145 million annually. As a result, during that period, Pennsylvania’s overall funding for pre-K programs more than doubled. [12/16/21 N.T. at 4912 (Campanini)].

1858. Pennsylvania’s budget specifically for the Pre-K Counts program increased from approximately \$147 million in the 2016-17 school year to \$242 million in the current budget. [12/16/21 N.T. at 4999-5000 (Campanini)].

1859. The Pre-K Counts program is the largest of the Commonwealth’s state-funded pre-K programs. [12/13/21 N.T. at 4501 (Barnett)]. Pre-K Counts programs are provided by school districts, private academic nursery schools licensed by the PDE, Head Start grantees, care centers, and groups that are designated as high-quality settings on the Keystone STARS evaluation. [Parties’ Joint Designations of the 7/2/20 Deposition of Tracey Campanini (hereinafter, “Campanini Dep.”) at 28:3-10].

1860. The Pre-K Counts program is available to families with an income of less than 300 percent of the federal poverty line – which encompasses about 60% of Pennsylvania’s population. [12/13/21 N.T. at 4500 (Barnett)]. Combined, during the 2019-20 school year, Pennsylvania’s five state-funded pre-K programs enrolled about 22% of 4-year-olds and 11% of 3-year-olds in the Commonwealth. [12/13/21 N.T. at 4501 (Barnett)]. As of December 2021, more than 29,000 children participated in the Pre-K Counts program, which was an increase of 4,000 children since July of 2020. [12/16/21 N.T. at 4952 (Campanini)].

1861. All Pre-K Counts and Head Start grantees in Pennsylvania are required to use OCDEL’s early childhood education standards. [12/16/21 N.T. at 4914 (Campanini)]. The standards are rigorous and reflect five goals: “one, engage in activities that include measuring, representing, organizing, and understanding data; two, persist in activities that include measuring, representing, organizing, and understanding data; three, problem solve in activities that include measuring, representing, organizing, and understanding data; four, when prompted, communicate thinking while engaged in activities that include measuring, representing, organizing, and

understanding data; and fifth and finally, talk and listen to peers during activities that include measuring, representing, organizing, and understanding data.” [12/16/21 N.T. at 4922-23 (Campanini); PX-00069-0039]. School districts that implement Pre-K Counts or Head Start must align their curricula to these standards. [12/14/21 N.T. at 4784 (Campanini)].

1862. The Pre-K Counts program also requires teachers to have a four-year degree in specialized training and early childhood development. [12/13/21 N.T. at 4553 (Barnett)]. By contrast, the federally funded Head Start program only requires that half of the teachers have a four-year college degree. [12/13/21 N.T. at 4554 (Barnett)].

1863. Among the Petitioner Districts, as of the 2016-17 school year, 42% of 3- and 4-year-olds in the Greater Johnstown School District were enrolled in either Pre-K Counts or Head Start. [12/14/21 N.T. at 4698 (Barnett)]. Other Petitioner Districts have similar percentages of participation: 31% at the School District of Lancaster, 37% at the Panther Valley School District, 36% at the Wilkes-Barre Area School District, and 43% at the William Penn School District. [12/14/21 N.T. at 4698-4699 (Barnett)]. Dr. Barnett was unable to verify the participation in Head Start or Pre-K Counts for Shenandoah Valley School District because the district sponsors its own preschool program for 4-year-olds living in the district. [12/14/21 N.T. at 4699 (Barnett)].

1864. In 2014-15, Pennsylvania funded 18,205 total pre-K student slots in both its Pre-K Counts and Head Start programs. In 2020-21, Pennsylvania funded 31,593 total slots in both of these programs. This represents a 73.54% increase in the number of total Pre-K Counts and Head Start student slots funded by Pennsylvania over this seven year period. [LR-05046A].

C. OCDEL’s Assessment of Pre-K Programs

1865. OCDEL uses the Keystone STARS program to assess the quality of a pre-K program in Pennsylvania. The Keystone STARS program designates pre-K programs with a certain STAR number. A STAR 1 program is reserved primarily for licensed childcare providers.

A STAR 2 program has met certain requirements regarding community and family partnerships, and has committed to certain qualifications and staff development. [12/16/21 N.T. at 4933-35 (Campanini)].

1866. Programs designated as STAR 3 and STAR 4 that are in good standing with applicable performance standards and are licensed through the PDE are considered “high quality” programs. [Campanini Dep. at 115:20-24].

1867. When determining that there is an unmet need for Pre-K slots in Pennsylvania, OCDEL only considers programs designated as “high quality” and omits from the calculation STAR 1 and STAR 2 programs. [12/14/21 N.T. at 4768-69 (Campanini)].

1868. STAR 1 and STAR 2 programs, however, must still meet certain requirements for class size, staff qualifications, community partnerships, and other criteria. [12/16/21 N.T. at 4933-35 (Campanini)]. For example, STAR 2 programs require “All on-site program leadership team members and teaching staff to complete Professional Development Plans in the PD Registry to support educational achievement and professional growth.” [12/16/21 N.T. at 4947 (Campanini); LR-03076-00009]. Additionally, every Pre-K Counts and Head Start Supplemental Assistance program must have a ten-to-one student-to-teacher ratio and a maximum of 20 students per class, and most pre-K slots are full-day. [12/16/21 N.T. at 4957, 5017-18 (Campanini)].

1869. OCDEL also uses a broad definition of “at risk” children to determine the number of eligible children. OCDEL considers children living at up to 300% of the federal poverty guidelines as “at risk” and uses that figure to calculate unmet need. A family of four living at 300% of the federal poverty guidelines would earn approximately \$76,000 per year. [12/16/21 N.T. at 4949-50 (Campanini)].

D. Head Start

1870. Head Start has been a major federally-funded preschool program for children in poverty for the past 50 years. [12/14/21 N.T. at 4679 (Barnett)]. As of December 2021, approximately 26,000 Pennsylvania children were enrolled in the Head Start program. [12/16/21 N.T. at 4952-54 (Campanini)].

1871. The cost of Head Start is currently about \$10,000 per child annually. [12/14/21 N.T. at 4679 (Barnett)]. For the 2019-2020 school year, Pennsylvania's per student cost for the Head Start program was \$11,455 per child. [12/14/21 N.T. at 4679 (Barnett) (referring to his 2019 supplemental report)].

1872. The Head Start Supplemental Assistance Program ("Head Start Supplemental") provides state funds to supplement federal Head Start services. [12/14/21 N.T. at 4795-96 (Campanini)]. As of December 2021, about 8,200 children participated in the Head Start Supplemental Assistance Program. [12/16/21 N.T. at 4954 (Campanini)]. Pennsylvania's budget for Head Start Supplemental increased from approximately \$49 million in the 2016-17 school year to \$69 million in the current budget. [12/16/21 N.T. at 5000 (Campanini)].

1873. In 2018, total government spending nationally, when combining Head Start and state-funded pre-K programs, was about \$20 billion and enrolled nearly 3 million children. [12/14/21 N.T. at 4680 (Barnett)].

E. Studies on Pre-K Education

1874. Children and families can benefit from Pre-K programs. Those programs can, among other things, help children learn to regulate their behaviors, acclimate children to being in a school setting, and, when they are publicly funded, assist parents who need to work by saving them money that would otherwise be spent on a private childcare provider.

1875. When it comes to academic achievement, however, the research literature regarding pre-K programs is inconclusive as to the impact and long-lasting effects of pre-K. As Dr. Barnett stated, “[a]lthough public investment in preschool programs has expanded for more than a half century, important questions remain about the long-term effects of large-scale public programs.” [12/13/21 N.T. at 4595 (Barnett)].

1876. As a study of Pennsylvania’s Pre-K Counts program found, while the program was associated with positive outcomes through the end of kindergarten in language and mathematics, the program did not result in “positive effects on literacy, social-emotional development and self-regulation or executive function.” As the study also found, there was not an additional benefit for children who attend Pre-K Counts for two years starting at the age of three, versus students who attend the program for one year starting at the age of four. [12/13/21 N.T. at 4550 (Barnett)].

1877. Studies of other pre-K programs around the country, both state-funded programs and Head Start, have reached similarly inconclusive results. For example, a study conducted by the National Institute for Child Health and Human Development (“NICHD”) analyzed the effects of pre-K on a broad selection of children across the country that was representative of the diversity of children in the United States. This study found that pre-K could produce “positive benefits or even some negative effects, mostly very mild in either direction[.]” [12/13/21 N.T. at 4531 (Barnett)].

1878. Additionally, a study by the UpJohn Employment Institute found that the effectiveness of “most state-funded preschool programs on 4th grade NAEP scores is about zero[.]” [12/13/21 N.T. at 4530 (Barnett)].

1879. Tennessee has a state-funded voluntary preschool program for 4-year-old children. Tennessee’s program “offers a warning that positive effects cannot be presumed to persist in every case, as positive initial effects fade to zero and transition to small negative effects in follow-up through 3rd grade.” [12/13/21 N.T. at 4574 (Barnett)].

1880. In 2021, Dr. Barnett co-authored a report studying the effects of New Jersey’s Abbott preschool program on children’s achievement, grade retention and special education through 10th grade. As Dr. Barnett stated in his report, “research generally finds that children who did and did not attend preschool programs converge on measures of learning and development after they leave the programs. Evaluations often have found modest initial gains that tend to become negligible in the first few years of primary school.” [12/14/21 N.T. at 4631-4632 (Barnett)].

1881. With respect to studies of large-scale public programs such as the Abbott program, “rigorous evaluations of large-scale public programs often find more modest initial effects, and sometimes, but not always, find little or no lasting effect.” [12/13/21 N.T. at 4599-4600 (Barnett)]. Research studies on large-scale public pre-K programs have concluded that these programs often “have produced only weak and superficial initial effects on learning that do not lead to substantive long-term gains in achievement.” [12/13/21 N.T. at 4575-4576 (Barnett)].

1882. This is true of both state-funded pre-K programs and Head Start. With respect to Head Start, Dr. Barnett indicated that the program did not “generate substantial persistent improvements in educational outcomes.” [12/13/21 N.T. at 4574-4575 (Barnett)]. Studies of Head Start, including a large-scale randomized trial, have found that academic outcomes between students who attended Head Start and those who did not begin to converge after exiting

preschool until 3rd grade, when the impact of the program effectively fades out. [12/13/21 N.T. at 4575, 4651-52 (Barnett)].

1883. As stated by Dr. Barnett stated in an article that he co-authored related to Head Start and the Tennessee pre-K program: “These two studies are far from alone, with other rigorous but non-experimental studies producing similarly disappointing results for the persistence of effects of public preschool programs on achievement.” [12/14/21 N.T. at 4625-4626 (Barnett)]. As Dr. Barnett explained in addressing a pre-K program in Boston, studies found that the effects of the program for 4-year-olds “largely disappeared in follow up.” [12/14/21 N.T. at 4626 (Barnett)].

1884. While OCDEL, for its part, has articulated policy positions on the effectiveness of pre-K programs, those positions are based on outside research. OCDEL does not conduct its own research. For instance, OCDEL has not conducted its own research on whether children who participate in pre-K are more likely to succeed in kindergarten or less likely to require special education or remediation services. [12/16/21 N.T. at 4984-87 (Campanini)]. Similarly, OCDEL has not conducted research in relation to its position that high-quality pre-K “supports language acquisition for English learners[.]” [12/14/21 N.T. at 4745 (Campanini)].

1885. The Court concludes that the evidence presented at trial demonstrates that there is uncertainty regarding whether pre-K programs result in sustained positive impacts on student achievement, as well as the cost-effectiveness of such programs. Moreover, it is not the role of this Court to weigh in on the wisdom of particular educational programs or policy initiatives.

F. Factors and Resources Outside of School

1886. As stated by Dr. Barnett, “both biological and environmental mechanisms can explain the erosion of initial gains, including the efforts and expenses of schools to remediate

low levels of achievement.” [12/13/21 N.T. at 4576 (Barnett)]. Early experiences and traumas can become embedded in a child and set them on a certain trajectory of cognitive development. [12/13/21 N.T. at 4577-78 (Barnett)]. Some examples of experiences that can negatively impact a child and student outcomes include a death in the family, incarceration of a parent, or loss of a parent’s job. [12/13/21 N.T. at 4589-4590 (Barnett)].

1887. “[E]arly differences in cognitive, academic and social skills emerge from a complex set of family circumstances related to family income that include not only financial circumstances but parental education, family structure and the conditions of the neighborhood. All of these contribute to learning and development with the parental capacity to combine their own time with resources to provide home experiences that support early learning, one particularly important aspect.” [12/14/21 N.T. at 4694 (Barnett)].

1888. Additionally, children can, and often do, receive some of the benefits of pre-K from their parents, including helping children build resilience to overcome challenges. [12/13/21 N.T. at 4590 (Barnett)].

1889. As Dr. Noguera agreed, there are important questions that remain unanswered about the wisdom of large scale investments in early childhood education. [01/14/2022 N.T. at 8502 (Noguera)].

G. Pre-K Program Design

1890. There is ongoing debate among experts regarding the proper characteristics of preschool programs and the additional conditions and context for persistent improvements in learning and development beyond kindergarten and the early grades. [12/14/21 N.T. at 4690 (Barnett)]. Despite numerous studies into pre-K programs, there is no consensus on how to design a pre-K program that would guarantee long-lasting effectiveness or even ensure that programs that had been effective in the past would continue to be effective. [12/14/21 N.T. at 4687 (Barnett)].

1891. Dr. Barnett maintains that the high-quality preschool program he recommends that Pennsylvania adopt would be cost-effective. However, as he acknowledges, he actually does not know what the program would cost. [12/14/21 N.T. at 4683 (Barnett)]. While Dr. Barnett has made recommendations about the types of preschool programs that Pennsylvania should implement, his opinions about the impact of those programs are based merely on what he would call an “educated prediction.” [12/14/21 N.T. at 4683-84 (Barnett)].

1892. As Dr. Barnett acknowledges, the current state of knowledge provides few guarantees regarding the effectiveness of preschool programs. [12/14/21 N.T. at 4687 (Barnett)].

XIV. POST-SECONDARY OPPORTUNITIES

A. General

1893. There isn’t a one-size-fits-all post-secondary path for students to follow, so it is important for them to be prepared for success on whatever path they take after graduating from high school, whether they enter the workforce, join the military or continue their education. [12/1/21 N.T. at 2105-2106 (Stem); LR-04191-00001].

1894. According to PDE, “[c]learly, a traditional four-year degree is not the only path to middle and high-skill careers paying family sustaining wages.” [12/1/21 N.T. at 2114 (Stem); LR-04216-00008].

1895. Thirty-one percent of young workers with an associate’s degree earn more in salary and wages than those with a bachelor’s degree. [12/1/21 N.T. at 2114 (Stem); LR-04216-00008].

1896. Twenty-seven percent of young workers with licenses and certificates earn more in salary and wages than those with a bachelor’s degree. [LR-04216-00008].

1897. A majority of jobs in the United States require what PDE calls “middle skills,” which students often obtain through two-year technical degrees and training programs.

[LR-04216-00008]. About 50% of all jobs in Pennsylvania are considered “middle skilled.” This percentage is higher than the national average, which is 48%. [LR-04216-00008].

1898. There are many Pennsylvania residents who are leading productive lives and contributing to society who don’t have a post-secondary education. [12/2/22 N.T. at 2430 (Stem)].

1899. In Pennsylvania, apart from high school-level CTE programs, there are approximately 1,000 post-secondary CTE programs (two-year degree programs) and 344 adult CTE programs (offering less than a two-year degree) in operation. [LR-04216-00003].

B. The State Board’s Post-Secondary Attainment Goal

1900. In 2016, the State Board adopted an attainment goal of having 60% of Pennsylvania’s age 25-64 population hold a post-secondary degree or industry-recognized credential by 2025. [12/13/21 N.T. at 4386-89 (Molchanow)]. For purposes of this goal, the relevant population includes Pennsylvania residents who attended and graduated from high school in the Commonwealth, attended post-secondary institutions in the Commonwealth, or moved to the Commonwealth from another state. It does not include individuals who were educated in Pennsylvania public schools or post-secondary institutions but now reside in another state. [PX-07008-0004, 0005].

1901. As part of the post-secondary attainment goal that it adopted, the State Board expressed its view that Pennsylvania’s age 25-64 population should attain the following levels of education by 2025:

- 11% of the population with a master’s degree or higher;
- 22% of the population with a bachelor’s degree; and,
- 33% of the population with an industry certificate or an associate’s degree.

[LR-01028-00005].

1902. Likewise, PDE's ESSA plan includes a discussion of the post-secondary attainment goal. According to the ESSA plan, PDE predicts that, by 2025, 33% of jobs will require a bachelor's degree or higher, 33% of jobs will require an industry certificate, and 33% of jobs will not require any post-secondary education. [PX-01830-0107].

1903. As of 2014, prior to its adoption of its post-secondary attainment goal, the State Board received information showing that Pennsylvania's residents had a total post-secondary attainment level of 44%. In particular, Pennsylvanians aged 25-64 had attained the following levels of education:

- 12% of the population had a Master's degree or higher;
- 20% of the population had a bachelor's degree; and,
- 12% of the population had an industry certificate or an associate's degree.

[LR-01028-00005; PX-03339-0001].

1904. As of 2019, the State Board received information showing that, between 2014 and 2019, the post-secondary attainment levels of Pennsylvanians aged 25-64 had increased approximately 6.7%. In particular, as of 2019, Pennsylvanians aged 25-64 had a 50.7% post-secondary attainment level. [PX-07008-0019]. In particular, the information received by the State Board showed the following breakdown of post-secondary credentials:

- 13.2% of the population had a Master's degree or higher;
- 21.6% of the population had a bachelor's degree; and,
- 15.8% of the population had an industry certificate, certification, or an associate's degree.

[PX-07008-0019].

1905. Younger Pennsylvanians have even higher levels of post-secondary attainment. The State Board received information showing that, as of 2019, Pennsylvanians aged 25-34 had a 55.3% post-secondary attainment level. [PX-07008-0020]. In other words, this group had a post-secondary attainment level that was 4.6% higher than the population of Pennsylvanians aged 25-64. In particular, as of 2019, Pennsylvanians aged 25-34 had attained the following levels of education:

- 12.9% of the population had a Master's degree or higher;
- 27.0% of the population had a bachelor's degree; and,
- 15.4% of the population had an industry certificate, certification, or an associate's degree.

[PX-07008-0020].

1906. The State Board has determined that there should be a focus on increasing credentials in industry-aligned certificates and associate's degrees. It recognizes that, among the different categories of attainment, the largest gap between the attainment goal that it adopted in 2016 and the predicted needs for Pennsylvania in 2025 exists with regard to the percentage of Pennsylvanians who hold industry certificates or associate's degrees. [12/13/21 N.T. at 4389-90 (Molchanow)].

1907. In fact, as the data from 2019 shows, Pennsylvanians aged 25-64 have already surpassed the 2025 post-secondary attainment goals that the State Board set with regard to acquiring a bachelor's degree or higher. While the State Board determined that at least 33% of Pennsylvanians aged 25-64 should have a bachelor's degree or higher, as of 2019, 34.8% of them already had a bachelor's degree or higher. [LR-01028-00005; PX-07008-0019].

1908. Likewise, PDE believes that Pennsylvania already has a sufficient number of residents who hold a bachelor's degree or higher, but needs more individuals who have completed a certificate program or obtained an associate's degree. [01/18/2022 N.T. at 8770-71 (Ortega)].

C. Pennsylvania Post-Secondary Statistics

1909. Over the last several years, the number of Pennsylvania's students who have enrolled in post-secondary and higher education immediately after they graduated from high school has increased – going up about 3.4% between 2009 and 2015. [LR-01028-00014]. Additionally, an increasing number of Pennsylvania students have enrolled in post-secondary or higher education within one year after they graduated from high school. [LR-01028-00014, 00015].

1910. 87.3% of Pennsylvania high school graduates who enrolled in post-secondary education within the first year after graduation returned to post-secondary education for a second year. [PX-03338-0012].

1911. Pennsylvania ranks third nationally (behind California and New York) in its number of post-secondary institutions. [LR-01028-00004].

1912. Pennsylvania ranks fourth nationally in the number of students who are enrolled in post-secondary institutions within its borders. [LR-01028-00004].

1913. Pennsylvania LEAs provide PDE with data regarding the percentages of their graduates who are bound for post-secondary study. According to the data, from 2015-16 to 2019-20, school districts in Pennsylvania reported the following percentages of post-secondary bound students:

- a. 2015-16 – 66.8% of total students;
- b. 2016-17 – 68.18% of total students;

- c. 2017-2018 – 71.72 % of total students;
- d. 2018-2019 – 69.36 % of total students;
- e. 2019-2020 – 63.61 % of total students.

[12/2/22 N.T. at 2342-48 (Stem); PX-02010 through PX-02014].

1914. According to Petitioners' expert witness, Dr. Belfield, Pennsylvania has a greater concentration of residents with at least a bachelor's degree (18.8%) than the national average (10.3%). Dr. Belfield also stated that Pennsylvania has a lower number of students who fail to graduate from high school (9.8%) than the national average (12.6%). With respect to the number of residents who have an associate's degree or a graduate or professional degree, Pennsylvania is consistent with the national average. [1/19/22 N.T. at 9120-9122 (Belfield)]. It follows that, according to Petitioners' own expert witness, Dr. Belfield, Pennsylvania residents exceed the national average when it comes to graduation rates and post-secondary attainment rates.

1915. In 2019, the percentage of Pennsylvanians with an associate degree or higher was 44.4 percent, higher than the national average of 43.8 percent. [01/18/2022 N.T. at 8819-20 (Ortega); PX-02234-0001]. Pennsylvania increased its percentage of residents with associate degrees and higher from 42 percent in 2013 to 44.4 percent in 2019. [01/18/2022 N.T. at 8821 (Ortega); PX-02234-0001].

1916. Pennsylvania's overall rate of educational attainment has increased by 12.8 percentage points since 2008. [01/18/2022 N.T. at 8820 (Ortega); PX-02234-0001].

1917. One factor that inhibits Pennsylvania with regard to the State Board's post-secondary attainment goal of 60 percent is that the number of students who are enrolled in the Commonwealth's K through 12 public school system has been declining in recent years. In

Pennsylvania, there may not be enough total students who are attending and graduating from high school today to meet this 60 percent mark. [01/18/2022 N.T. at 8821-22 (Ortega); PX-02234].

D. Limitations of National Student Clearinghouse Data

1918. In this case, Petitioners frequently cited to, and relied on, data from the National Student Clearinghouse (“NSC”). [See, e.g., PX-04840; PX-04841; PX-04842].

1919. PDE receives and relies on data from the NSC as well.

1920. While institutions that are part of Pennsylvania’s system of public education use NSC data, the Court recognizes the limitations of using this data.

1921. The Court, for example, does not have NSC post-secondary enrollment or graduation data for states other than Pennsylvania. Accordingly, the Court is unable to assess whether, based on data from the NSC, Pennsylvania is doing better or worse than other states.

1922. The NSC is a private, non-profit institution, not a governmental entity. Post-secondary institutions that participate in the NSC do so on a voluntary basis. [01/18/2022 N.T. at 8737-38 (Ortega)].

1923. The NSC underreports the number of students who were enrolled in or graduated from post-secondary institutions. [01/18/2022 N.T. at 8757-58 (Ortega)].

1924. There are students who are enrolled in post-secondary institutions and yet are not reflected in the NSC database. [01/18/2022 N.T. at 8756-57 (Ortega)].

1925. Some post-secondary institutions do not report data to the NSC. [01/18/2022 N.T. at 8756-57 (Ortega)].

1926. Even if a post-secondary institution participates in the NSC, it is not required to report data to the NSC. [01/18/2022 N.T. at 8753 (Ortega)].

1927. PDE only provides the NSC with data that pertains to students who graduated from public high schools in Pennsylvania, not students who graduated from other types

of high schools in the Commonwealth. [01/18/2022 N.T. at 8739 (Ortega)]. Accordingly, students who do not attend Pennsylvania public schools are not reflected in NSC data or considered for purposes of determining the Commonwealth's post-secondary attainment rate.

1928. PDE does not know whether universities and colleges that operate entirely online report data to the NSC. [01/18/2022 N.T. at 8755 (Ortega)].

1929. PDE does not know whether, for purposes of NSC reporting, two-year post-secondary institutions have a lower coverage rate than four-year post-secondary institutions. [01/18/2022 N.T. at 8758 (Ortega)].

1930. Two-year post-secondary institutions generally enroll a higher percentage of economically-disadvantaged students than four-year post-secondary institutions. [01/18/2022 N.T. at 8758 (Ortega)].

1931. The NSC does not provide Pennsylvania with data regarding students who are enrolled in certificate programs. [01/18/2022 N.T. at 8769 (Ortega)].

1932. The NSC does not provide Pennsylvania with data regarding students who were enrolled in specialized training programs, such eight-week training courses. [01/18/2022 N.T. at 8769 (Ortega)].

1933. The NSC does not provide Pennsylvania with data regarding students who completed a certificate or training program through which they did not receive a post-secondary degree. [01/18/2022 N.T. at 8769-70 (Ortega)].

1934. Under the Family Educational Rights and Privacy Act (FERPA), some students opt out of the NSC data collection process. [01/18/2022 N.T. at 8765 (Ortega)].

1935. In reviewing the NSC data, there is not a way to distinguish between an unreported student and a student who is not enrolled in a post-secondary institution. [01/18/2022 N.T. at 8757 (Ortega)].

1936. Notably, in generating its data, the NSC disproportionately undercounts students in particular demographic groups with regard to whether they are enrolled in post-secondary institutions or have earned a post-secondary degree.

1937. Most importantly for purposes of this case, the NSC disproportionately undercounts the post-secondary enrollment and degree attainment rates of economically-disadvantaged students as compared to students who are not economically-disadvantaged. [01/18/2022 N.T. at 8760-61 (Ortega)].

1938. The NSC disproportionately underreports African American students who are enrolled in or graduated from college as compared to white students. [01/18/2022 N.T. at 8761 (Ortega)].

1939. The NSC data disproportionately underreports Hispanic students who are enrolled in or graduated from college as compared to non-Hispanic students. [01/18/2022 N.T. at 8761-62 (Ortega)].

1940. For-profit post-secondary institutions are less likely than other post-secondary institutions to participate in the NSC. [01/18/2022 N.T. at 8755-56 (Ortega)].

1941. The coverage rate in NSC reporting for non-profit post-secondary institutions is higher, while that rate for for-profit post-secondary institutions is lower. [01/18/2022 N.T. at 8759 (Ortega)].

1942. Private for-profit post-secondary institutions enroll a larger percentage of economically disadvantaged students than public and non-profit four-year institutions. [01/18/2022 N.T. at 8759-60 (Ortega)].

1943. The NSC's coverage is generally higher at post-secondary institutions that are considered to be more selective than others. [01/18/2022 N.T. at 8760 (Ortega)].

1944. Less-selective post-secondary institutions typically enroll a higher percentage of economically disadvantaged students than more selective post-secondary institutions. [01/18/2022 N.T. at 8759-60 (Ortega)].

1945. Generally speaking, the NSC coverage does not extend to non-degree-granting post-secondary institutions. [01/18/2022 N.T. at 8763 (Ortega)].

1946. Non-degree-granting programs typically enroll a larger percentage of economically disadvantaged students than degree-granting programs. [01/18/2022 N.T. at 8763 (Ortega)].

1947. The NSC expressly recognizes the limitations of its own data. [01/18/2022 N.T. at 8803 (Ortega)].

1948. The summary exhibits created by Petitioners in this case which use NSC data do not reference or specify the limitations of NSC's data. [PX-04840; PX-04841; PX-04842].

1949. When PDE receives data from the NSC, it comes with margins of error related to the NSC's data. It is the NSC's common practice to disclose these limitations. [01/18/2022 N.T. at 8756, 8803 (Ortega)].

1950. The summary exhibits created by Petitioners in this case which use NSC data do not reference or specify the margins of error for the NSC data that they contain. [PX-04840; PX-04841; PX-04842].

1951. The NSC includes advisory statements or warnings with its data explaining that it does not collect data from all post-secondary institutions. [01/18/2022 N.T. at 8752 (Ortega)].

1952. The summary exhibits created by Petitioners in this case which use NSC data do not contain any advisory statements or warnings related to the fact the NSC does not collect data from all post-secondary institutions. [PX-04840; PX-04841; PX-04842].

1953. NSC sometimes adjusts its data to address the fact that it does not cover all post-secondary institutions. [01/18/2022 N.T. at 8752 (Ortega)].

1954. The summary exhibits created by Petitioners in this case which use NSC data do not contain any such adjustments. [PX-04840; PX-04841; PX-04842].

1955. The data reported on the summary exhibits created by Petitioners differs from the data reported by Secretary Ortega to the State Board of Education. [Compare PX-04840 with PX-03338; 01/18/2022 N.T. at 8749-51 (Ortega)]. PDE has no explanation for these discrepancies.

E. College Readiness

1956. Between 2017 and 2022, PDE has not conducted any studies about college readiness in the Commonwealth. [Parties' Joint Designations of the July 7, 2020 Deposition of Secretary Noe Ortega (hereinafter, "Ortega Dep.") at 101:13-19].

1957. PDE does not keep any data as to why a particular student who enrolls in college fails to persist in college. [01/18/2022 N.T. at 8812 (Ortega); PX-03338].

1958. Likewise, Petitioners' expert, Dr. Belfield, relied on an analysis of post-secondary attainment levels that does not include any assessment of the reasons why individuals obtain or do not obtain post-secondary education. Dr. Belfield did not attempt to determine the

levels of college preparedness for individuals who did not attend college. [1/19/22 N.T. at 9098-99 (Belfield)].

1959. In Pennsylvania, there are many students who graduate from high school who may be sufficiently prepared to go to college but do not do so because they are unable to afford it. [01/18/2022 N.T. at 8815 (Ortega)].

1960. There are a variety of reasons why a student might not attend or complete college, apart from being inadequately prepared to do so. [1/19/22 N.T. at 9094 (Belfield)].

1961. Relative to other types of students, economically-disadvantaged students encounter greater barriers to pursuing post-secondary education. [1/19/22 N.T. at 9095-96 (Belfield)]. For instance, the financial constraints that pertain to attending post-secondary institutions disproportionately impact economically-disadvantaged students. Likewise, there are some students who are prepared to attend college but choose not to do so because of other economic circumstances in their lives, such as the need to obtain a full-time job to support themselves or their families. [1/19/22 N.T. at 9096-97 (Belfield)].

1962. Petitioners failed to prove that the relative level of financial resources that public schools had at their disposal is what caused some students to enroll or not enroll in post-secondary education. As one example, in 2016, data from PDE indicated that 68.7% of Pennsylvania female public school graduates enrolled in post-secondary education within 12 months after graduating from high school as compared to 57.6% of their male counterparts. Although 11% more of the female students enrolled in post-secondary education than the male students, the schools that they attended did not devote more financial resources to them than male students. [01/18/2022 N.T. at 8812-13 (Ortega); PX-03338-0009; *see also* 01/06/2022 N.T. at 7108 (Harbert)].

1963. The “gap” between the male and female students must therefore be due to factors other than the amount of financial resources that their schools devoted to them. [01/18/2022 N.T. at 8813 (Ortega)].

1964. The existence of attainment gaps is not unique to Pennsylvania. [01/18/2022 N.T. at 8821 (Ortega)].

F. Miscellaneous

1965. In partnership with post-secondary educational institutions, PDE operates Community Education Councils to provide forms of post-secondary educational opportunities in places where those institutions are not otherwise generally present. [01/18/2022 N.T. at 8787 (Ortega)].

1966. PDE has a transfer and articulation oversight committee, which has the goal of “ensur[ing] that classes transfer between sectors,” for example between two-year colleges and four-year institutions. [Ortega Dep. at 172:1-8].

1967. PDE “work[s] closely in partnership with secondary schools” to ensure dual and concurrent enrollment opportunities are available to Pennsylvania students before they graduate from high school. [Ortega Dep. at 173:6-10].

XV. COVID-19 PANDEMIC

1968. On March 13, 2020 – while the current litigation was in the discovery stages – Governor Wolf issued an Executive Order in response to the then-emerging COVID-19 pandemic requiring the temporary closure of all Pennsylvania schools. On April 9, 2020, Governor Wolf extended the school closure for the remainder of the academic year.¹¹

¹¹ Proposed findings of fact relating to ESSER funding provided by the federal government to help states and school districts to mitigate the impact of COVID-19 on public education are set forth in Section XV, above.

1969. School districts throughout Pennsylvania adopted a variety of approaches to educating their students during the pandemic, which were influenced by a number of factors, including but not limited to the school districts' existing technological capabilities; the technological infrastructure available within the community; community COVID transmission rates; and parent, teacher and community preferences regarding safety issues and a return to in-person learning.

1970. The different approaches towards delivering an education during the pandemic extended to the Petitioner Districts. For instance, for the balance of the 2019-20 school year, Wilkes-Barre initially provided instruction to students by utilizing Google classroom, a platform on which teachers were able to post instructional content (which might include items such as YouTube videos or Power Point presentations). Students having internet capabilities were able to login and follow the materials posted. By the beginning of April 2020, Wilkes-Barre "had begun transferring over to utilizing live instruction, where a couple of times during the week, we asked our teachers to record videos or do specifically live instructions with our students, and we wanted them to be able to follow the schedule that they had during the day." [1/26/22 N.T. at 10792-93 (Costello)].

1971. In Lancaster, the district had already started to roll-out its one-to-one iPad initiative prior to the onset of the pandemic. When the pandemic arose, iPads that had previously been given to elementary school students were redeployed to high school students, so that students in grades 6-12 could participate in remote learning, while K-5 students worked from paper packets. [12/16/21 N.T. at 5197-99 (Rau)]. By April 2020, devices had been given to each family with elementary school students, so that families with one, two or three students would get one iPad, and those with three or more would get two. [12/16/21 N.T. at 5199 (Rau)].

1972. On the other hand, Shenandoah Valley did not institute any online learning for the 2019-20 school year because although the district had 300 Chromebooks, it “didn’t have the knowledge base or the ability to know who needed a Chromebook and who did not” and the district believed its teachers “didn’t have the skill set” to be able to deliver online instruction. [12/8/21 N.T. at 3467-68 (Waite)]. Instead, the district utilized paper packets. [12/8/21 N.T. at 3468-70 (Waite)].

1973. The learning environment that existed during the remainder of the 2019-20 school year was, to say the least, challenging for school districts, teachers, parents and students alike. Even schools that were able to offer live virtual instruction, such as those in Wilkes-Barre, encountered technical issues and less-than-ideal learning conditions, in which, for example, multiple siblings might be attempting to participate in separate virtual classrooms from the same living space. [1/26/22 N.T. at 10794-95 (Costello)].

1974. As explained by Dr. Hacker, even in Springfield Township “it was challenging to engage children, particularly if their parents had to go to work and weren’t there to monitor what the children were doing.” [1/25/22 N.T. at 10516-17 (Hacker)]. As described by Dr. Hacker: “It was exhausting for parents. It was exhausting for teachers to try to engage a class set of 20 to 25 children online with Zoom, and it ... made it challenging, but we all were committed to making it work as best we could and to doing whatever we could to identify those challenges and to find ways to overcome them.” [1/25/22 N.T. at 10517 (Hacker)].

1975. When the 2020-21 school year commenced, school districts continued to adopt different approaches with respect to the type of instruction provided to students. For instance, by September 2020, Shenandoah Valley was able to provide one-to-one devices for all

of its students and started the 2020-21 school year on an in-person hybrid instructional model. [12/8/21 N.T. at 3470-71 (Waite)].

1976. Wilkes-Barre, which had been able to use ESSER funds to complete its one-to-one Chromebook initiative, and to ensure that every student had a device to use, also provided its families with the option for students to return for in-person instruction or to participate in live (synchronous) virtual instruction. [1/26/22 N.T. at 10794-95 (Costello)].

1977. By contrast, when Lancaster reopened in fall 2020 “we were still primarily virtual compared to most of the districts in our county.” [12/16/21 N.T. at 5205 (Rau)]. Lancaster started bringing back ELL learners, followed by elementary school students who returned in mid-October until Thanksgiving. After Thanksgiving, Lancaster once again closed its school buildings due to concerns regarding possible surges in COVID-19 following the holidays, and did not resume in-person instruction until January 25, 2021. [12/16/21 N.T. at 5207-08 (Rau)]. It was not until May 2021 that Lancaster offered every student the opportunity to return for in-person instruction. However, many parents of Lancaster students still did not want their children to attend school in person. [12/16/21 N.T. at 5207-08 (Rau)].

1978. Lancaster also created the Cyber Pathways Education Program for kindergarten through fifth grade students who were not comfortable returning to in-person learning following the COVID-19 pandemic. Students in this program were provided with a district-issued computer or iPad, reimbursement for home internet costs, 24-hour access to their academic courses online, and access to IT support for technical or computer issues. [12/16/21 N.T. at 5094; 12/17/2021 N.T. at 5346–48 (Rau)].

1979. As with fully remote learning, even the hybrid instruction offered by many school districts during the 2020-21 school year created challenges. For instance, teachers in hybrid

environments were confronted with a situation in which some of the students were in front of the teacher and yet still utilizing an electronic device to view the class, while others were at home participating virtually. [1/26/22 N.T. at 10795-96 (Costello)].

1980. It is clear that the Covid-19 pandemic had an impact on school districts, teachers, parents and students throughout the Commonwealth. [See generally 1/26/22 N.T. at 10870 (Costello) (“I think the impact on [sic] COVID has been devastating for our students and for all students during this time of uncertainty”)].

1981. In March 2022, after witness testimony in this case had been completed, PDE released data regarding the 2021 Pennsylvania assessments. Such data showed a general decline in scores since before the pandemic. [PX-08318-00001]

1982. The results of the 2021 Pennsylvania assessments are concerning in that they provide data to suggest potential learning losses among the Commonwealth’s students as a direct result of the pandemic. However, data regarding a decrease in test results during the midst of a global pandemic has little probative value with respect to the constitutional questions posed in this case, *i.e.*, whether the General Assembly has fulfilled its constitutional duty to provide for the maintenance and support of a thorough and efficient system of public education to serve the needs of the Commonwealth.

1983. Many educators felt that it was “not prudent” to administer standardized assessments during the COVID-19 pandemic when students were working from home.” [1/10/22 N.T. at 7587-88 (Becoats)]. Likewise, as Petitioners’ expert Dr. Johnson testified, “I would not use any three years that overlap a pandemic to study student achievement[.]” [1/21/22 N.T. at 9670 (Johnson)].

1984. As PDE has stated, it “urges caution in interpreting results given the unique learning conditions over the past few years.” [LR-03445-00001] It further noted that Pennsylvania, like many other states, afforded school districts flexibility with respect to the administration of assessments during the pandemic, and “[t]he variability in testing periods, sharply reduced student participation rates, and other factors make comparisons between school entities and across school years improper.” [LR-03445-00001].

1985. For instance, there was a 52% reduction in the number of students who took the Biology Keystone exam in 2021, as compared to the number of students taking the exam in 2019. More striking, there was a 91% reduction in the number of students who took the Literature Keystone exam in 2021, as compared to the number of students taking the exam in 2019. [LR-03441].

1986. Similarly, with the PSSA exams, at every grade level and subject, there was between a 24 and 31% reduction in the number of students who took the PSSA exams in 2021, as compared to 2019. [LR-03440].

1987. The Keystone exam proficiency rates in Algebra I and Biology at Lancaster’s McCaskey Campus, Shenandoah Valley High School, and Wilkes-Barre former’s high schools (prior to their consolidation), actually increased in 2021. Some of the increases were substantial. For instance, at Lancaster’s McCaskey Campus, 25.4% more students scored proficient on the Algebra I Keystone exam, as compared to 2019. At E.L. Meyers High School in Wilkes-Barre, 50.2% more students scored proficient on the 2021 Keystone Biology, as compared to 2019. [LR-03444; LR-03446; LR-03447].

1988. The court received no testimony or explanation about these issues because the standardized test score data was released after the close of testimony in the trial. It is likely that

PDE, like the departments of education in most states, will need to revisit the achievement goals set forth in its ESSA plan to determine whether those goals need to be modified in light of COVID's impact. [12/2/21 N.T. at 2411-12 (Stem)]. While Mr. Stem was not aware of PDE having had those conversations as of the time of his testimony in December 2021, he knew "from being in the field and watching what's happening in other states that there are states that are considering revisiting their goals in light of the impact of COVID." [12/2/21 N.T. at 2413-14 (Stem)].

XVI. EXPERT WITNESSES

1989. At trial, Petitioners and Legislative Respondents each introduced the testimony of several expert witnesses.

A. Petitioners' Expert Witnesses

i. Dr. Matthew Kelly

1990. Dr. Kelly is an assistant professor at Penn State University. He teaches courses on school finance and data informed decision-making for school leaders. [11/18/21 N.T. at 1134 (Kelly)].

1991. Dr. Kelly received his Ph.D. from Stanford University in 2018. Most of his academic writing has been on the history of education. At the time he submitted his expert report in August 2020, he had been a professor for approximately two years. [2/22/22 N.T. at 14580-85 (Kelly Rebuttal); PX-03036-0001].

1992. Dr. Kelly has a long-standing history of advocating to increase public school funding, both in Pennsylvania and across the country. During the course of this case, his advocacy included social media posts on Twitter describing one of this Court's pretrial rulings as a "[s]ignificant victory in PA school funding case." [11/19/21 N.T. at 1371-73 (Kelly)].

1993. In addition to the opinions discussed elsewhere in these Proposed Findings of Fact, a primary purpose of Dr. Kelly's expert analysis was to calculate what he characterized as the Commonwealth's "Adequacy Target, Adequacy Shortfall, and State Funding Target." Dr. Kelly opined that the "adequacy shortfall" to Pennsylvania's school districts is approximately \$4.6 billion per year. [11/18/21 N.T. at 1177-78 (Kelly); PD-0003-0017]. However, his adequacy shortfall calculations varied significantly, depending on which of his alternate measurements and data he used. Indeed, as Dr. Kelly acknowledged, his alternative calculations of the purported adequacy shortfall varied by as much as \$1.6 billion per school year. [11/18/21 N.T. at 1321 (Kelly)]. [PD-0003-0018, PD-0095].

1994. As Dr. Kelly acknowledged, his "adequacy shortfall" calculations were computed with respect to all sources of revenues for public schools. For instance, with respect to his primary opinion of a \$4.6 billion per year adequacy shortfall, Dr. Kelly assessed the Commonwealth's share of that shortfall as \$2.6 billion in 2018-2019. As Dr. Kelly admitted, however, even if Pennsylvania were to contribute an additional \$2.6 billion per year, his own calculations would still leave a \$2 billion annual shortfall that would need to come from other sources, such as the federal government or local school districts, which are not parties to the present litigation. [11/18/21 N.T. at 1321-22 (Kelly); LR-02021-00047].

1995. Dr. Kelly's adequacy target and adequacy shortfall calculations were derived by updating the calculations formerly required under Section 2502.48 of the School Code, which themselves emanated from the 2007 Costing Out Study performed by APA. [11/18/21 N.T. at 1308-09 (Kelly)].

1996. Dr. Kelly did not attempt to independently assess the accuracy or validity of the numbers or calculations that were used in the Costing Out Study. As he acknowledged, he

did not have access to the kind of research team and resources that he would need to conduct a costing out study. [11/18/21 N.T. at 1310-11 (Kelly)].

1997. Dr. Kelly has never performed a Costing Out Study and has never been engaged by a state to study or make recommendations with respect to their school finance systems. [11/18/21 N.T. at 1311 (Kelly)].

1998. Dr. Kelly's total shortfall calculation was derived from summing the alleged adequacy shortfalls that he computed for each school district in Pennsylvania. [11/18/21 N.T. at 1176-78 (Kelly)]. However, in reaching his self-described shortfall figures for each school district, Dr. Kelly: (1) did not speak to any school district officials in the state to determine the resources that those officials think they need or want; (2) did not conduct an individualized analysis of the education opportunities that exist in each district; and (3) did not investigate the educational results in any of the state's school districts. [11/19/21 N.T. at 1343, 1360 (Kelly)].

1999. In reaching his opinion, Dr. Kelly did not attempt to determine whether there were low spending, high performing districts that were meeting the state's proficiency standards, acknowledging that he "did not focus on that particular data point." [11/18/21 N.T. at 1320 (Kelly)].

2000. Similarly, Dr. Kelly did not attempt to estimate the dollar amount that it would take any particular school district to raise their students' performance on standardized tests to specific levels of proficiency. [11/19/21 N.T. at 1378-79 (Kelly)].

2001. Thus, Dr. Kelly's adequacy shortfall calculations were principally an exercise in arithmetic; that is, Dr. Kelly performed the mathematical exercise necessary to update APA's adequacy calculations, but did not himself attempt to determine what constitutes an

“adequate” education, what level of resources would be necessary to provide such an education, or the estimated cost of obtaining such resources.

2002. Dr. Kelly contended that the reason he replicated and updated the adequacy target, state funding target and shortfall calculations set forth in Section 2502.48 is that he believes those calculations are legally required, and he further opined that “the level of education funding is inadequate ***under state law.***” [11/18/21 N.T. at 1177-78, 1299-1300 (Kelly) (emphasis added)]. However, as he admitted, he “is not a legal scholar.” [11/18/21 N.T. at 1300 (Kelly)].

2003. As Dr. Kelly further acknowledged, PDE has not calculated adequacy targets or shortfalls since the 2010-2011 school year, and he is aware that PDE’s Director of Subsidy, Mr. Hanft, testified that adequacy targets and adequacy shortfalls have not been calculated since then because those calculations are not required by current state law. [11/18/21 N.T. at 1301-07 (Kelly); *see also* 2/7/22 N.T. at 12110–12117, 12127 (Hanft)].

2004. The Costing Out Study that forms the underlying basis for Dr. Kelly’s adequacy shortfall calculations has been subjected to several criticisms, which undermine its reliability as a source for computing so-called adequacy targets or shortfalls. As Dr. Hanushek summarized: “I don’t believe that it’s a reliable or trustworthy guide of what the state should do, particularly if the stated wanted to improve the quality of its students.” [2/16/2022 N.T. at 14090 (Hanushek)].

2005. The premise of costing-out studies is “that scientific methods can provide good advice to decision-makers on education of how much to spend to achieve some particular goal.” [2/16/2022 N.T. at 14090 (Hanushek)]. However, there is ample reason to question whether any of the costing-out studies provide a scientific basis for such an effort. [02/16/2022 N.T. at 14091 (Hanushek)].

2006. The APA Costing Out Study, in particular, was flawed for the reasons stated in Section IV.F above.

2007. Because the APA Costing Out Study that Dr. Kelly attempted to update is not a reliable measure of what it would cost to deliver any particular quality of education, and Dr. Kelly did not personally undertake any such an analysis himself, his adequacy shortfall calculations are not probative on the issue for which they were presented, *i.e.*, attempting to determine the additional amount of money necessary for all school districts to deliver a constitutionally adequate education.

2008. Furthermore, Dr. Kelly's calculation of the purported adequacy shortfall, if any, for each school district yields results that are inconsistent with the evidence presented at trial. Dr. Kelly concluded that an adequacy shortfall existed in between 410 to 428 Pennsylvania school districts, depending on which of his alternative methodologies was being considered. [11/18/21 N.T. at 1316 (Kelly)]. If accepted, this would mean that between 82% and 86% of school districts in Pennsylvania lack adequate funding.

2009. Although the Court was not presented with specific evidence regarding the educational opportunities made available in the overwhelming majority of Pennsylvania school districts, any analysis that would suggest that more than 82% of school districts in Pennsylvania are insufficiently funded to provide adequate educational opportunities to their students is inconsistent with the high level data presented in this case. As discussed above, Pennsylvania is one of the top states in the country in per-pupil spending on public education. It has some of the most rigorous teacher credential requirements in the country. It is a national leader in STEM education. It has experienced educators and low teacher-pupil ratios.

2010. Even considering outcome measures which are frequently highlighted by Petitioners, Pennsylvania's students are doing very well in comparison to other states. Pennsylvania's high school graduation rates are above the national average. Pennsylvania's reading and math NAEP scores have been significantly higher than the national average in most years, with Pennsylvania students having the 9th highest scores nationally in 4th grade math, the 16th highest scores nationally in 8th grade math, the 10th highest scores nationally in 4th grade reading, and the 18th highest scores nationally in 8th grade reading as of 2019. The average SAT score for Pennsylvania students exceeds the national average. Only five states in the country had a higher percentage of students who scored 3 or above on AP exams.

2011. Furthermore, even with the limited data presented regarding the non-Petitioner school districts, it is apparent that several school districts that Dr. Kelly identified as having adequacy shortfalls are offering educational opportunities that allow their students to meet or exceed performance expectations. For instance, Dr. Kelly calculated adequacy shortfalls of \$4,178 per adjusted ADM for Tyrone and \$1,600 for Abington Heights. [PD-0003-107, PD-0003-0125]. Yet, Tyrone High School has proficient/advanced percentages of 93.6% in ELA, 90.4% in Math and 94.4% in science and a 95.7% four-year cohort high school graduation rate. [LR-01831-00001, 00002, 00007]. Likewise, Abington Heights High School has proficient/advanced percentages of 94.6% in ELA, 87.0% in Math and 90.9% in science and a 96.4% four-year cohort high school graduation. [LR-1813-00001, 00002, 00007].

2012. Dr. Kelly calculated shortfalls per adjusted ADM of \$1,957 for Crestwood and \$1,240 for Jim Thorpe, the school districts in which Superintendents Waite and McAndrew, respectively, used to work, and attempted to compare favorably to their own districts. [PD-0003-0111, 0115].

2013. Other school districts that Dr. Kelly identified as having an adequacy shortfall include:

a. Central Columbia School District, with a purported adequacy shortfall of \$1,655 per adjusted ADM. [PD-00003-0110]. Central Columbia Senior High School had proficient/advanced percentages of 88.7% in ELA, 86.2% in Math and 88.8% in science and a 95.5% four-year cohort high school graduation rate. [LR-1840-00001, 00002, 00007].

b. Downingtown Area School District, with a purported adequacy shortfall of \$1,244 per adjusted ADM. [PD-00003-0112]. Downingtown High School West Campus had proficient/advanced percentages of 89.7% in ELA, 83.9% in Math and 86.1% in science and a 93.9% four-year cohort high school graduation rate. [LR-01850-00001, 00002, 00007].

c. Pennsbury School District, with a purported adequacy shortfall of \$954 per adjusted ADM. [PD-00003-0120]. Pennsbury High School had proficient/advanced percentages of 85.5% in ELA, 75.5% in Math and 79.6% in science and a 95.0% four-year cohort high school graduation rate. [LR-01869-00001, 00002, 00007].

d. Riverside School District, with a purported adequacy shortfall of \$3,450 per adjusted ADM. [PD-00003-0122]. Riverside Senior High School had proficient/advanced percentages of 84.9% in ELA, 78.0% in Math and 74.1% in science and a 89.3% four-year cohort high school graduation rate. [LR-01872-0001, 00002, 00007].

e. Haverford Township School District, with a purported adequacy shortfall of \$406 per adjusted ADM. [PD-00003-0115]. Haverford School District had Keystone exam proficient/advanced percentages of 92.7% in algebra, 84.4% in biology and 90.8% in

literature and a four year graduation rate of 95.81%. [LR-00469, Lines 1748, 1750 & 1752; PX-1992, Tab “Grad Rate by LEA,” Line 279].

2014. For all of these reasons, the Court finds that Dr. Kelly’s calculation of a purported adequacy shortfall is not helpful to its analysis.

ii. Dr. Derek Black

2015. Professor Black is a law professor who has dedicated much of his career to advocating for “education finance equity.” [11/17/21 N.T. at 904, 988-89 (Black)]. Among other things, his scholarship has advanced theories in support of recognizing a fundamental right to education under the United States Constitution, notwithstanding his acknowledgment that the U.S. Supreme Court has rejected the argument that the federal Constitution guarantees such a right. [11/17/21 N.T. at 993-94 (Black)].

2016. Professor Black was asked by Petitioners to “explore the history and development of the Education Clause across time in the State of Pennsylvania to get a better sense of ... what the motivations and factual predicates were to those changes.” [11/17/21 N.T. at 915-16 (Black)].

2017. In preparing his expert analysis, Professor Black relied primarily on the debates of the 1873 Constitutional Convention, and not the events leading up to the adoption of the Education Clause by Pennsylvania voters in 1967. [11/17/21 N.T. at 995 (Black)]. Indeed, as Professor Black testified, he “really doesn’t know much about the details” by which the voters adopted the current Education Clause in 1967 and approved a constitutional convention for later in that year. [11/18/21 N.T. at 1066-67 (Black)].

2018. As Professor Black further acknowledged, his analysis of the 1873 Constitutional Convention focused on the statements made by individual delegates, and yet the

views of a particular delegate wouldn't necessarily reflect the views of other delegates or the Constitutional Convention as a whole. [11/17/21 N.T. at 1005 (Black)].

2019. As Professor Black agreed, his “basic key opinion” is that the delegates to the Constitutional Convention viewed education as being “very important.” Yet, as he acknowledged, he has not offered any opinion that the Respondents do not treat education as important. [11/17/21 N.T. at 1007 (Black)].

2020. Professor Black opined that the delegates to the 1873 Constitutional Conventions wanted to isolate education from politics. In support of his opinion, he noted that the 1874 Constitution made the state superintendent of education an independent constitutional officer, which would not be an extension of the governor. [11/18/21 N.T. at 1050–1051 (Black)]. However, as Professor Black acknowledged, the State Superintendent of Education was subsequently replaced by the position of the Secretary of Education. The current version of the Constitution expressly provides that the Secretary of Education is an executive officer appointed by the governor with the consent of two-thirds of the Pennsylvania Senate. [11/18/21 N.T. at 1051–1052 (Black)]. Furthermore, in Pennsylvania, each school district is run by a local school board whose members are elected public officials. [11/18/21 N.T. at 1054–1055 (Black)].

2021. Professor Black testified that prior to the 1873 Convention, public schooling had failed to gain traction in poor and more remote areas of Pennsylvania and a significant portion of rural Pennsylvania did not have any schools at all. He gave his opinion that, in requiring a thorough and efficient education system, the intention of the 1874 Education Clause was to serve all children together under one system of schools to be established by the Commonwealth, in order “to encourage and ensure the expansion of education into every nook and cranny of the State,

particularly the smaller, poorer and more remote areas of the state.” [11/17/21 N.T. at 957; 11/18/21 N.T. 1029 (Black)].

2022. Professor Black did not offer any opinions regarding the intent of the voters in approving the current version of the Education Clause on May 16, 1967 and, as he acknowledged, he had never researched what those voters believed the phrase “thorough and efficient to serve the needs of the Commonwealth,” to mean. [11/18/21 N.T. at 1077 (Black)].

2023. Accordingly, although Professor Black’s testimony provided the Court with some limited assistance in understanding the historical context that led to the adoption of the 1874 version of the Education Clause, his opinion is not helpful to the Court in understanding or construing the current language of the Education Clause.

iii. Dr. Steven Barnett

2024. Dr. Barnett’s testimony is discussed in Section XIII, above, regarding pre-K.

iv. Dr. Pedro Noguera

2025. Petitioners presented the expert testimony of Dr. Pedro Noguera (“Dr. Noguera”), the Dean of the Rossier School of Education at the University of Southern California. Dr. Noguera’s primary area of research is the sociology of education. As a trained sociologist for over 30 years, Dr. Noguera’s research focuses on “the ways in which schools are affected by social and economic conditions at a local, regional, and national level,” including the impact of poverty on education. [01/13/2022 N.T. at 8215-19 (Noguera)].

2026. In addition to being a scholar and an expert witness, Dr. Noguera has long been a policy advocate attempting to win public support for what he deems to be a “progressive education agenda.” [01/13/2022 N.T. at 8393 (Noguera)].

2027. Dr. Noguera's role as an expert witness at trial was "to address the ways in which poverty impacts the character of school and the types of measures that schools can employ to compensate for those impacts." [01/13/2022 N.T. at 8242 (Noguera)].

2028. As Dr. Noguera agreed, "poverty has a profound influence on child development and student achievement." [01/13/2022 N.T. at 8403 (Noguera)]. Students raised in poverty are at increased risk for negative outcomes compared to non-poor children across a number of factors, including academic difficulties; high school dropout rates; health differences, including childhood obesity, asthma and overall poor health; and greater behavioral and emotional problems. [01/13/2022 N.T. at 8403 (Noguera)]. Children living in poverty are more likely to be exposed to violence, crime, abuse or psychological trauma outside of the school building, and adolescents living in poverty are more likely to engage in risk-taking and antisocial behaviors that negatively impact academic achievement. [01/13/2022 N.T. at 8404 (Noguera)].

2029. As Dr. Noguera confirmed, while ACEs manifest in school, they are caused by things happening outside of the school building. [01/14/2022 N.T. at 8540 (Noguera)].

2030. Out-of-school factors associated with poverty can impact on educational outcomes in other ways as well. For instance, as Dr. Noguera explained, "children who come from low income households have fewer resources at home to support their education; that is parents, because they tend to have lower levels of education, cannot provide the same kind of academic support with homework, et cetera, or guidance by having to navigate the educational systems." [01/13/2022 N.T. at 8247 (Noguera)]. As Dr. Noguera also testified: "[W]e know poor children have fewer books in their homes, and this has an impact on reading and the development of literacy skills." [01/13/2022 N.T. at 8251 (Noguera)].

2031. As Dr. Noguera summarized, “[a]n extensive body of research has documented the ways in which poverty and related social conditions- including food and home insecurity, family illness, and incarceration of family members- can contribute to lower rates of achievement and educational attainment.” [01/14/2022 N.T. at 8524 (Noguera)]. As he agreed, such societal conditions, e.g., poverty, food insecurity, and home insecurity, are problems that generally are not created by the public school system. [01/14/2022 N.T. at 8525 (Noguera)].

2032. As Dr. Noguera observed, research suggests that approximately two-thirds of the variation in student achievement can be explained by out-of-school factors. [01/13/2022 N.T. at 8408 (Noguera)].

2033. As Dr. Noguera further confirmed, his research supported the conclusion reached by Professor Ladd – in a 2012 article that Dr. Noguera relied upon in his expert report – that even in countries that are typically viewed as having high-performing education systems, e.g. Korea, Finland, and Canada, achievement levels of lower income children “fall far short of those of their more advantaged counterparts.” [01/14/2022 N.T. at 8492-93 (Noguera)]. As Dr. Noguera explained, it would “be difficult, if not impossible” for the United States to replicate the success of these countries by focusing on school reform alone. [01/14/2022 N.T. at 8493 (Noguera)].

2034. As Dr. Noguera also agreed: “Though understandable and also commendable in some ways, this reluctance even to suggest that some children face educational challenges that schools alone may not be able to address signifies a denial of the basic correlations between family background and student achievement. Simply wanting something to be true does not make it so.” [01/14/2022 N.T. at 8495 (Noguera)]. As Dr. Noguera similarly acknowledged, “even if we set aside the role of family background, the goal of 100 percent proficiency is absurd

unless the proficiency levels are set so low as to be meaningless.” [01/14/2022 N.T. at 8495 (Noguera)].

2035. As Dr. Noguera also opined, the concept of student achievement includes more things than just standardized test scores, including: growth, graduation rates, grades that students are able to earn in their courses, promotion rates, and post-secondary school attendance rates. [01/14/2022 N.T. at 8555-57 (Noguera)]. Dr. Noguera stated that he agrees with the statement: “[E]ducational outcomes alone - even far richer and more comprehensive measures than the student test scores now being used in the United States - cannot serve as an appropriate proxy for school quality.” [01/14/2022 N.T. at 8494 (Noguera)].

2036. While acknowledging that “schools cannot eliminate poverty,” Dr. Noguera opined that “under the right conditions, we have clear evidence that low-income children, including minority children, can perform at very high levels.” [01/13/2022 N.T. at 8280-81, 8381 (Noguera)]. Yet, as he explained, “educational issues are notoriously complex and do not lend themselves to quick fixes.” [01/13/2022 N.T. at 8395 (Noguera); LR-02135-00002].

2037. Dr. Noguera testified regarding numerous evidenced-based strategies or interventions that he thought could be effective in improving educational achievement among students in poverty. As he acknowledged, some of the strategies and interventions that he recommended could be instituted relatively inexpensively, while others would require a significant financial investment to implement. [01/14/2022 N.T. at 8503 (Noguera)].

2038. Although Dr. Noguera advocated for specific strategies and interventions, he acknowledged that “there has been a history of sometimes reforms have been implemented over a long period of time and not worked.” [01/13/2022 N.T. at 8398 (Noguera); LR-02135]. For instance, Dr. Noguera stated that he is “aware” of the conclusion by Dr. Barnett, one of the

Petitioners’ other experts, “that Head Start, as it has been provided to most children for a half century, has at best, very modest, persistent impacts on children’s cognitive development and academic achievement.” [01/14/2022 N.T. at 8506 (Noguera)].

2039. As Dr. Noguera also agreed, “there is no consensus” as to whether class size can have a material impact on student learning. [01/14/2022 N.T. at 8573 (Noguera); LR-03073]. As Dr. Noguera acknowledged, allocating resources to reduce class size is “very expensive and that you have to weigh the actions available to a school system or to a State for how to use resources.” [01/14/2022 N.T. at 8574-76 (Noguera)]. As Dr. Noguera also acknowledged, some research shows class size reduction can have negative unintended consequences. [01/14/2022 N.T. at 8498-99, 8584 (Noguera)].

2040. Similarly, while Dr. Noguera identified after-school programs and summer school programs as evidence-based strategies or interventions that might have a positive impact on achievement, “[t]he evidence on the effectiveness of after-school programs and summer schools is somewhat mixed.” [01/14/2022 N.T. at 8496-97 (Noguera)].

2041. Dr. Noguera also cited cyber charter schools as an educational intervention in which certain states, including Pennsylvania, have invested significant financial resources that, in Dr. Noguera’s opinion, have not demonstrated success in improving achievement. [01/14/2022 N.T. at 8505 (Noguera)]. In his article entitled “It’s Time to Develop a Progressive Education Agenda,” Dr. Noguera wrote: “For almost 20 years, reformers have had their chance to demonstrate what their vision for education could achieve and they failed to deliver the improvement they promised.” [01/13/2022 N.T. at 8397 (Noguera); LR-02135-00003].

2042. As Dr. Noguera agreed, any academic benefit of equitable funding strategies will only be evident over time and are unlikely to occur immediately. [01/14/2022 N.T.

at 8462 (Noguera)]. As he further acknowledged, PDE’s ESSA plan sets its goals out through the year 2030, and even in 2030, it anticipates there will still be achievement gaps between the all student group and the economically disadvantaged group. [01/14/2022 N.T. at 8462 (Noguera)].

2043. Dr. Noguera agreed with PDE’s statement in its ESSA Plan that “PDE has invested significant resources to provide high-quality, evidence-based induction, mentoring and professional development supports to educators throughout their careers that will improve both student- and school-level outcomes.” [01/14/2022 N.T. at 8479-80 (Noguera)].

2044. As Dr. Noguera agreed, it is “appropriate” for state policymakers and local school officials to consider the cost of programs and interventions in determining which to support. [01/14/2022 N.T. at 8504 (Noguera)]. As he conceded, it is “possible” that Pennsylvania could spend significant sums to implement one or more of his recommended evidence-based strategies only to have other educational researchers in the future find that his results were disappointing and that those strategies have limited effect on educational achievement. [01/14/2022 N.T. at 8508 (Noguera)].

2045. Dr. Noguera did not attempt in his expert analysis in this case to calculate the overall cost to taxpayers if the Commonwealth of Pennsylvania were to implement the various evidence-based strategies that he recommends or the cost of implementing any of the specific strategies that he highlighted in his expert report. [01/14/2022 N.T. at 8503 (Noguera)].

2046. Dr. Noguera did not actually analyze whether Pennsylvania – or high poverty school districts within Pennsylvania – have already implemented some of the educational strategies and interventions he endorses.

2047. While Dr. Noguera opined that it is critical to invest in professional development to support stronger relationships from teachers to teachers and teachers to students,

he acknowledged that he was not opining that Pennsylvania schools need to invest in professional development in the first place. [01/14/2022 N.T. at 8564 (Noguera)].

2048. Dr. Noguera identified a community school model as an evidence-based initiative that can potentially address the negative impacts of poverty but, as he acknowledged, a community school initiative is something contained as a strategy within the Pennsylvania ESSA plan. [01/14/2022 N.T. at 8480-81 (Noguera)].

2049. Dr. Noguera opined that underfunded schools tend to have poor facilities, but conceded that he was not offering any opinion regarding the facility conditions in any particular schools or districts in Pennsylvania. [01/14/2022 N.T. at 8481-82 (Noguera)].

2050. While Dr. Noguera expressed that, in his expert opinion, there are “a number” of teachers in high poverty districts who are not certified in the subject that they are teaching, he could not offer a “precise number” of improperly certified teachers in Pennsylvania and did not attempt to analyze the number of classes taught by uncertified teachers for the purposes of offering his expert opinion in this case. [01/14/2022 N.T. at 8483-84 (Noguera)].

2051. Dr. Noguera opined as to the importance of teachers having warm, caring and supportive relationships with their students, but had “not conducted research” into whether such relationships exist in Petitioner Districts. [01/14/2022 N.T. at 8486 (Noguera)]. Similarly, Dr. Noguera did not analyze whether any of the Petitioner Districts may already be employing some or all of the effective teaching strategies that he endorsed. [01/14/2022 N.T. at 8487 (Noguera)].

2052. Dr. Noguera has not reached any conclusion about whether specific Petitioner Districts or their schools lack a positive school climate as described in his expert report. [01/14/2022 N.T. at 8489 (Noguera)].

2053. As Dr. Noguera testified, there are other strategies and interventions that could mitigate the impact of student poverty, including effective leadership, high expectations for students, and teachers who are efficacious in promoting mastery in learning. [01/14/2022 N.T. at 8489-90 (Noguera)]. He confirmed that he was not opining that William Penn or any other Petitioner District lacked those characteristics. [01/14/2022 N.T. at 8489-90 (Noguera)].

2054. As Dr. Noguera testified, while the types of supports he identified in his testimony may help to mitigate the effects of poverty on the development of children, they don't eliminate it all together. [01/13/2022 N.T. at 8408 (Noguera)].

2055. As Dr. Noguera further agreed, a high poverty district is not the same thing as a low revenue district. There are some high poverty districts in Pennsylvania that are well above the state average in revenue per student. [01/13/2022 N.T. at 8410 (Noguera)]. For instance, as he agreed, the School District of Pittsburgh and Lancaster can both be classified as high poverty districts that also have high revenues per ADM. [01/13/2022 N.T. at 8410-11 (Noguera)].

2056. As Dr. Noguera agreed, in Pennsylvania, low achievement on standardized tests is more strongly correlated with districts serving a high percentage of students in poverty than it is with the district's level of revenue. [01/13/2022 N.T. at 8411-12 (Noguera)]. As he further acknowledged, some research in the field calls into question the relationship between increased spending and increased achievement. [01/13/2022 N.T. at 8417 (Noguera)].

2057. Dr. Noguera characterized Pennsylvania as being "among the worst states in the nation in quality of education opportunity." However, as he conceded, the underlying sources he cited as a basis for that opinion concluded that Pennsylvania's high schools rank No. 15 out of 50 states in "average opportunity score" for all students, and ranked 23 out of 50 states in average opportunity score for lower income students (as measured by eligibility a free or

reduced price lunch). [01/13/2022 N.T. at 8419, 8428-30 (Noguera)]. As Dr. Noguera further acknowledged, he had “no reason not to agree” that, for high school students overall, Pennsylvania schools provide high access to educational opportunity compared to most other states. [01/14/2022 N.T. at 8544 (Noguera)].

2058. Notwithstanding any shortcomings that he believes to exist in the public school system, Dr. Noguera agreed with the statement that “most people recognize that public schools are still among the most accessible and democratic institutions in American society” and that this statement applies to Pennsylvania public schools. [01/13/2022 N.T. at 8399 (Noguera)].

v. Dr. Clive Belfield

2059. Dr. Belfield is a professor of economics at the Queens College City University of New York. [1/19/22 N.T. at 8958 (Belfield)]. His primary area of research is the economics of education with a concentration in benefit cost analysis of educational interventions. [1/19/22 N.T. at 8959 (Belfield)]. He has been engaged to testify in numerous school funding cases throughout the country – always by the plaintiffs. [1/19/22 N.T. at 9071 (Belfield)].

2060. Dr. Belfield offered an opinion “on the relationship between educational investments and economic consequences for the Commonwealth of Pennsylvania.” [1/19/22 N.T. at 8967 (Belfield)]. He concluded that “there are significant economic benefits to the Commonwealth of Pennsylvania and to Pennsylvania taxpayers from increases in educational attainment.” [1/19/22 N.T. at 8967 (Belfield)].

2061. Dr. Belfield’s analysis is specifically based on measures of “attainment” rather than “achievement” – *i.e.*, students attaining a high school diploma or college degree, rather than how well a student performs on a standardized test. [1/19/22 N.T. at 8977 (Belfield)]. He focused on attainment in part because “it is a more direct relationship for analysis than achievement.” [1/19/22 N.T. at 8977 (Belfield)].

2062. While Dr. Belfield's expert report stated that he was opining on the social and economic benefits of failing to provide an adequate education, he acknowledged on cross-examination that his expert opinion was actually focused on the asserted benefits of reaching two specific attainment goals: (1) 100 percent of Pennsylvania students graduating from high school; and (2) achieving parity in the number of economically disadvantaged and non-disadvantaged students attending and completing college. [1/19/22 N.T. at 9092-9094 (Belfield)]. Yet, as Dr. Belfield conceded, the quality of education is not the sole reason that some students do not graduate from high school, and there are reasons that a student does not attend or complete college unrelated to being adequately prepared. [1/19/22 N.T. at 9094, 9261 (Belfield)].

2063. Dr. Belfield specifically did **not** opine on whether increased education funding causes greater educational attainment or opine on the amount of education funding necessary to provide an adequate education. [1/19/22 N.T. at 8968 (Belfield)].

2064. For purposes of his analysis, Dr. Belfield has not done a complete cost-benefit analysis or calculated a benefit-cost ratio. [1/19/22 N.T. at 9076-9077 (Belfield)]. Importantly, while he opines generally regarding the benefits of reaching certain educational attainment goals, he has not attempted to identify what education policies, reforms or interventions might be implemented in order to achieve those goals. [1/19/22 N.T. at 9077 (Belfield)]. Similarly, Dr. Belfield has not attempted to calculate how much it would cost to reach the attainment goals he advances in his analysis. [1/19/22 N.T. at 9077-9078 (Belfield)].

2065. Notably, Dr. Belfield had actually warned against this very practice in his own textbook on economics, *Economic Evaluation in Education*. In his textbook, Dr. Belfield stated: "[A] proper assessment of costs and effectiveness or benefits is a necessary element of a

serious evaluation. All too often, either costs or effects are considered separately, and any combined inferences may be misleading.” [1/20/22 N.T. at 9291 (Belfield)].

2066. Dr. Belfield did not assess the quality of the education provided in any of Pennsylvania’s school districts. [1/19/22 N.T. at 9084 (Belfield) (acknowledging that he did not look at the quality of education provided “in terms of inputs” – only outputs)]. He also did not assess the likelihood that the educational attainment goals described in his report could actually be reached at any particular spending level. [1/19/22 N.T. at 9085 (Belfield)].

2067. Dr. Belfield was not asked to opine as to specific programs or inventions and their benefit-cost analysis – even though he has done that very analysis in other school funding cases. [1/19/22 N.T. at 9078 (Belfield)]. For example, in the 2009 *Abbott v. Burke* case in New Jersey, Dr. Belfield advocated for certain supplemental programs that he estimated would cost \$33,000 for each middle school and high school student and \$31,000 for each elementary school student (in non-inflation adjusted dollars). [LR-02006-00033].

2068. As Dr. Belfield agreed, if one is attempting to determine the economic impact of something, she should consider not only its potential benefits but also its costs. [1/19/22 N.T. at 9105, 9108 (Belfield)].

2069. As Dr. Belfield confirmed, in order to increase attainment, a “policymaker would need to know what interventions to implement . . . and how much those interventions would cost” and his report does not address this or how many years of investments it would take to begin seeing economic benefits. [1/19/22 N.T. at 9153-9154 (Belfield)]. As he also agreed, the Commonwealth does not have unlimited funds and must make choices about where it is going to spend its finite resources. [1/19/22 N.T. at 9158 (Belfield)]. Dr. Belfield does not have any

evidence of the benefits of other investments – besides education – to which the Commonwealth could allocate additional spending. [1/19/22 N.T. at 9162-9163 (Belfield)].

2070. Dr. Belfield's report used U.S. Census data to confirm that Pennsylvania's education spending per student is the 8th highest in the country. [1/19/22 N.T. at 9119 (Belfield)]. Since he prepared his report in 2021, new U.S. Census data became available that identifies Pennsylvania as the 6th highest in the country for spending in term of K through 12 education. [1/19/22 N.T. at 9119-9120 (Belfield)].

2071. Dr. Belfield's report also confirms that Pennsylvania has a greater concentration of residents with at least a bachelor's degree (18.8%) and a lower number of students who fail to graduate from high school (9.8%) than the national average (10.3% and 12.6% respectively). [1/19/22 N.T. at 9120-9121 (Belfield)]. With respect to residents with an associate's degree or a graduate or professional degree, Pennsylvania is consistent with the national average. [1/19/22 N.T. at 9121-9122 (Belfield)].

2072. Dr. Belfield was not aware of the 2019 statistics in Pennsylvania's ESSA Plan that show that 20 percent of Pennsylvania's workforce had a bachelor's degree and that the percent of workers projected to be needed in 2025 for Pennsylvania's workforce with a bachelor's degree is 22 percent. [1/20/22 N.T. at 9221 (Belfield)]. Nor has he studied these numbers for purposes of his analysis. [1/20/22 N.T. at 9225 (Belfield)].

2073. Dr. Belfield was also not aware that the ESSA Plan projects that 11 percent of Pennsylvania's workforce will need a master's degree by 2025 – while 12 percent of Pennsylvania's residents currently have a master's degree or higher. [1/20/22 N.T. at 9225-9226 (Belfield)].

2074. While some economic projections in his expert report are based on projecting the economic benefits of a 100% high school graduation rate, Dr. Belfield stated in his book, *The Price We Pay*:

Aspirationally, we wish to find ways for all students to graduate from high school and to receive an excellent education. The literature on the causes of dropping out, however, suggest that this will not be accomplished by even the most promising educational interventions. Both statistical studies and surveys of dropouts suggest that the quality or type of education received is not the sole factor.

[1/20/22 N.T. at 9261 (Belfield)].

2075. In fact, as Dr. Belfield recognized in his book, there are a litany of out-of-school factors that impact student in-school performance. Dr. Belfield stated:

Family problems, frequent residential moves and school mobility, limited cognitive and physical abilities, psychological problems, pregnancies, and financial constraints all exert pressure on student to drop out. Experts agree that a more complete response will require changes not only to school, but also in the combined support and additional resources of families and communities.

[1/20/22 N.T. at 9261-62, 9267 (Belfield)].

2076. As Dr. Belfield recognized in his book *Economic Principles for Education*, around 15 to 40 percent of the labor force is found to be overeducated. [1/20/22 N.T. at 9328 (Belfield)]. Nevertheless, Dr. Belfield did not account for potential over-education in his expert report in this case. [1/20/22 N.T. at 9328 (Belfield)].

2077. Dr. Belfield based a large portion of his benefits analysis on data which purports to show the education levels of Pennsylvania students. However, as he explained on cross-examination, the data that he used was based on projections of student education levels. [1/20/22 N.T. at 9245 (Belfield)]. Accordingly, a relabeled version of the demonstrative exhibit

Dr. Belfield used was introduced to show that the numbers used in his analysis was based on his projections. [LR-03345].

2078. While Dr. Belfield relied on his projections regarding student education levels, he ignored the actual data available to him from PDE. For instance, Dr. Belfield projected that the 2015 cohort of Pennsylvania students would have 18,870 drop-outs. [1/20/22 N.T. at 9240 (Belfield)]. In contrast, the student drop-out data from 2015 shows 11,762 dropouts. Dr. Belfield was unable to explain this difference of over 7,000 drop-outs between his data and the data from PDE. Dr. Belfield could not describe with “any certainty” where he obtained the drop-out data used for the projections in his report. [PX-01929; 1/20/22 N.T. at 9340-43 (Belfield)].

2079. There were other notable problems with the data used by Dr. Belfield in his analysis. As part of his analysis, he purported to use college enrollment and graduation data from the National Student Clearinghouse. [PD-00014-0007]. Dr. Belfield was unable to explain where he obtained this data. [1/20/22 N.T. at 9309-11 (Belfield) (stating several times that he could not say where he obtained the data)]. Dr. Belfield noted that the only proof he could give that it was data from the National Student Clearinghouse was “the datasets” he believed he had given to the court. However, no such information was provided to the court or to Respondents’ counsel. Counsel for Petitioners confirmed that no such datasets from Dr. Belfield were ever provided. [1/20/22 N.T. at 9311-13 (Belfield)].

2080. Dr. Belfield’s inability to explain the ultimate source of his data was important because his data was incomplete. For instance, the chart purporting to show National Student Clearinghouse data at PD-00014-0007 shows data for 487 districts. However, there are 499 school districts in Pennsylvania that enroll students. Dr. Belfield was not able to say which school districts were omitted from his analysis. [1/20/22 N.T. at 9316 (Belfield)].

2081. Moreover, Dr. Belfield was unable to explain whether or not his data included charter schools, and, if it did, where the charter schools were included in his data set. [1/20/22 N.T. at 9316-17 (Belfield)].

2082. The Court finds that Dr. Belfield’s opinion amounts primarily to a public policy argument, which utilizes an economic analysis to opine that additional spending on public education would be a wise investment that would yield positive results for society.

2083. Dr. Belfield’s economic analysis is incomplete, and in many ways circular, in that he attempts to calculate the supposed benefits of educational outcomes without considering the inputs necessary to achieve those results. The analysis, moreover, rests upon the speculative and unproven assumption that additional spending could yield a 100% high school graduation rate or could equalize college attainment between economically disadvantaged and non-disadvantaged students.

2084. The issue before this Court is not whether greater educational attainment would have a positive impact on society, or whether additional spending on education would be a wise investment; it is whether the General Assembly has complied with its constitutional duty to provide for the maintenance and support of a thorough and efficient system of public education to serve the needs of the Commonwealth.

2085. For these reasons, the opinions offered by Dr. Belfield have no probative value to the constitutional issues before this Court.

vi. Dr. Rucker Johnson

2086. Dr. Johnson is the Chancellor Professor of Public Policy at UC Berkeley. His scholarship focuses on the “economics of education; in particular the role of investments in education and health, and particularly how poverty and inequality affect children’s later life chances.” [1/20/22 N.T. at 9378-79 (Johnson)]. Dr. Johnson was certified as an “expert on

econometrics of the relationship between changes in school funding and student achievement and economic outcomes.” [1/20/22 N.T. at 9409 (Johnson)].

2087. As Dr. Johnson acknowledged, studying the relationship between school funding and student achievement is difficult because school funding is “too connected to other confounding influences.” [1/20/22 N.T. at 9415 (Johnson)]. For instance, students who attend high wealth districts are more like to have wealthy parents, and they are more likely to live in better-resourced neighborhoods and communities. Trying to “disentangle” higher achievement due to parental wealth and socioeconomic advantage versus school quality is “extremely difficult.” [1/20/22 N.T. at 9415-16 (Johnson)].

2088. In 2015, Dr. Johnson, along with Drs. Jackson and Persico, published a study that found, among other things, a 10 percent increase in per-pupil spending each year for all 12 years in public school increased the years of completed education by half a year for children from low-income families. [1/20/22 N.T. at 9431 (Johnson)]. The study also found that the same funding increase led to a 6 to 8 percentage point increase in graduation rate, and that it increased future earnings by 10 percent. Adult poverty dropped by 6.1 percentage points. [1/20/22 N.T. at 9431-32 (Johnson)]. As Dr. Johnson conceded, these investments need to be sustained “over many years” to see the kind of improvements that he is describing. [1/20/22 N.T. at 9433 (Johnson)].

2089. As Dr. Johnson acknowledged, before his 2015 study, research on whether a relationship existed between funding increases and student achievement was inconclusive. As Dr. Jackson’s 2015 paper states, “[o]verall, the evidence of the effects of SFRs [School Finance Reforms] on academic outcomes is mixed, and the effects on long-run economic outcomes is unknown.” [1/21/22 N.T. at 9692-93 (Johnson)].

2090. Dr. Johnson testified that, after the publication of his 2015 paper, the pendulum has shifted to the conclusion that increased spending on education leads to improved educational outcomes. [1/21/22 N.T. at 9690-91 (Johnson)]. Nevertheless, when asked if there are still some researchers who do not agree with his conclusion, he testified, “I’m sure that that is so.” [1/21/22 N.T. at 9692 (Johnson)].

2091. The first major study on school funding reform, the Coleman Report, concluded that inequality in schools was largely due to inequality in family environments. [1/21/22 N.T. at 9684 (Johnson)]. Dr. Johnson acknowledged that Legislative Respondent’s expert Dr. Hanushek shares the same view as the Coleman Report and that Dr. Hanushek’s work is very influential and commonly cited. [1/21/22 N.T. at 9685 (Johnson)]. Other reputable researchers at notable universities reached the same conclusion as the Coleman Report and Dr. Hanushek. [1/21/22 N.T. at 9866 (Johnson)].

2092. The bulk of the studies that look at the relationship between spending and achievement concur with the Coleman Report and the work of Dr. Hanushek in concluding that there is no relationship between spending and achievement. [1/21/22 N.T. at 9863–64 (Johnson)]. Dr. Johnson, for his part, believes that it is not the number of studies but the quality of the studies that count, and in his view, higher quality studies agree with his position. Specifically, Dr. Johnson believes the earlier studies lack the granularity of his more recent study, because his study followed students from “birth to adulthood.” [1/20/22 N.T. at 9548 (Johnson)]. Dr. Johnson nevertheless has tremendous respect for scholars who have studied the relationship between spending and achievement and reached conclusions that differ from his. [1/20/22 N.T. at 9547 (Johnson)].

2093. While the results of Dr. Johnson’s studies appear to support the conclusion that sustained increases in funding closes achievement gaps between students in high-wealth and

low-wealth districts, Dr. Johnson’s work has several weaknesses, both generally and as applied to this case.¹² First, Dr. Johnson’s work considers projected, not actual spending. When actual spending is analyzed, it does not support Dr. Johnson’s conclusions. Second, Dr. Johnson’s studies looked at data that is often decades old, when per-pupil school funding was much lower, and so he does not know to what extent the law of diminishing marginal return might minimize his results, particularly at today’s spending levels. Third, Dr. Johnson has engaged in very little Pennsylvania specific analysis, and his conclusion seems to be simply that because spending increases may have worked elsewhere, so too would they work in Pennsylvania, without giving any real consideration as to current funding in Pennsylvania.

a. Projected spending

2094. As Dr. Johnson admitted, his report looked at predicted, rather than actual, spending. [1/21/22 N.T. at 9937 (Johnson)].

2095. When Dr. Johnson ran his analysis with actual, rather than predicted, spending increases, he obtained drastically different results. As Dr. Johnson stated in an article that he wrote, “our approach generated significantly different results than those that use observed increases in school spending by comparing our results to those we would have obtained had we used actual rather than predicted increases as our measure of changes in the district spending. ***For all outcomes, the results based simply on observed increases in school spending are orders of magnitude smaller than our estimates based on predicted SFR [school finance reform] inducted spending increases and most are statistically insignificant.***” [1/21/22 N.T. at 9942-44 (Johnson) (emphasis added)].

¹² Additional discussion regarding this issue is set forth in Section XVIII, the Failure to Prove Causation section of these Proposed Findings of Fact.

2096. As the same article noted, “[t]his stark contrast provides an explanation for why our estimates differ from those of other influential studies in the literature, including the Coleman report, itself.” [1/21/22 N.T. at 9948 (Johnson)].

2097. Despite generating completely different results when using actual spending, Dr. Johnson maintained, “if our model wasn’t accurately predicting changes in what the actual district did on average, then that would be a problem. But we can verify that, indeed, this is the case, that the prediction aligns very close with the actual behavior - - of the district.” [1/21/22 N.T. at 9940 (Johnson)].

2098. The 2015 Jackson, Johnson, and Persico paper stated, “We find that the effects of a 20 percent increase in school spending are large enough to reduce outcome gaps between children from poor and non-poor families by at least two-thirds.” But Dr. Johnson could not identify a single state in the United States where a 20 percent increase corresponded with a two-thirds reduction in outcome discrepancies. [1/21/22 N.T. at 9629-34 (Johnson)].

2099. While Dr. Johnson’s expert report states, “[p]erhaps most important of all, our study found that a 25 percent increase in per-pupil spending throughout one’s school years could eliminate the average attainment gaps between children from low income and non-poor families,” he has not found specific examples on a large scale basis of a 25 percent increase in per-pupil spending that has actually eliminated the average attainment gaps between children from poor and non-poor families. [1/21/22 N.T. at 9789-90 (Johnson)].

2100. Dr. Johnson’s contemporaries, Rothstein, Schanzenbach, and Lafortune, also reviewed student-level data using a similar methodology as the Jackson, Johnson, Persico study. While Rothstein, Schanzenbach, and Lafortune agree with Jackson, Johnson, and Persico on many points, their paper disagreed with Dr. Johnson when it comes to closing the student-level

achievement gap. Instead, Rothstein, Schanzenbach, and Lafortune found no discernible relationship between school funding and closing the statewide achievement gap between individual high and low income students. [1/21/22 N.T. at 9950-52 (Johnson)].

b. Diminishing marginal return

2101. The Jackson, Johnson, and Persico study mostly looked at cohorts of students born between 1955 and 1985, which corresponded with school funding reforms that happened in the 1970s, 80s, and 90s. [1/20/22 N.T. at 9421 (Johnson)].

2102. As Dr. Johnson agreed, there is still an ongoing question as to whether there is a diminishing marginal return on increases to education spending, because his studies were focused on a time when annual per pupil spending was approximately \$4,500, and today's spending figures are approximately \$15,000 per pupil. [1/21/22 N.T. at 9698 (Johnson)].

2103. As Dr. Johnson stated in a 2019 article that he wrote with Dr. Jackson:

There are two important caveats to our work. First, the counterfactual child care and pediatric care may be better today than in the late 1960s and 1970s, the marginal effect of Head Start may be smaller today than in the earlier period that we study. Second, public school spending levels during the period we study were lower than current levels. If school spending exhibits diminishing marginal product, the effects presented here may be larger than one would observe with similar spending increases today. These caveats do not minimize the importance of the findings or their profound implications for policy; *however, they do suggest that the contemporary magnitude of the effects may be smaller than those we present here*[.]

[1/21/22 N.T. at 9797-98 (Johnson) (emphasis added)].

c. Not Pennsylvania specific

2104. Dr. Johnson testified that he is “one of the biggest proponents of it’s not just whether money matters, but it’s how you allocate it to the most effective uses.” [1/20/22 N.T. at

9504 (Johnson)]. However, Dr. Johnson’s opinion does not actually analyze how Pennsylvania districts spend money.

2105. As Dr. Johnson admitted, he did not know what the proportion of funds just from the Commonwealth to low wealth districts would look like because he did an analysis of local and state funding together. He does not know what the chart entered as PD-0016-0010 would look like if he considered just state funding. [1/21/22 N.T. at 9659-60 (Johnson)].

2106. As Dr. Johnson acknowledged, PD-0016-0006, which looks at progressivity of school funding in PA, stops in 2011, and the chart shows progressive growth from \$.79 in 1990 to \$.91 in 2011. As he also acknowledged, the Fair Funding Formula was enacted in 2016, and he did not consider what progressivity would look like after its passage. [1/21/22 N.T. at 9661-62 (Johnson)].

2107. As Dr. Johnson agreed, because it takes time for funding increases to make a meaningful impact on student achievement, any student progress made as a result of the increased Pennsylvania school funding since 2014 are “not measurable at this time[.]” [1/21/22 N.T. at 9668-72:9 (Johnson)].

2108. As Dr. Johnson acknowledges, “the average spending is high in Pennsylvania relative to other states, it is high . . . I’m not refuting whether average per-pupil spending is higher than average in Pennsylvania.” [1/21/22 N.T. at 9724 (Johnson)].

2109. Dr. Johnson opined that sustained increases in school funding will improve long-term economic outcomes for students in low wealth districts in PA, and that it is crucial that those increases be sustained and not go “one year up, one year down.” [1/21/22 N.T. at 9612 (Johnson)]. When informed that there have not been any years since 2014 when BEF decreased,

Dr. Johnson testified that Pennsylvania “should be applauded.” [1/21/22 N.T. at 9668-69 (Johnson)].

2110. Despite the fact that Dr. Johnson cited his work in California as support for his underlying conclusions, US Census data from 2015 to 2019 shows that per pupil education spending in California has gone up from 31st to 18th while spending in PA has gone up from 8th to 6th. [1/21/22 N.T. at 9727 (Johnson)].

2111. Dr. Johnson acknowledged that, notwithstanding the education reform that has taken place in California, achievement and attainment gaps in measures including standardized test scores, high school drop-out rates, and college completion rates persist throughout California. Outcomes for black, Latino and economically-disadvantaged students in California still lag dramatically behind their Asian-American, white, and wealthier counterparts. [1/21/22 N.T. at 9716-18 (Johnson)].

B. Legislative Respondents’ Experts

i. Dr. Christine Rossell

2112. Dr. Rossell has a Ph.D. in political science from the University of Southern California and specializes in educational policy, school desegregation, bilingual education, English as a second language issues, research methods, and public policy analysis. [2/3/22 N.T. at 11790-91 (Rossell)].

2113. Dr. Rossell is a professor emeritus of political science at Boston University. [2/3/22 N.T. at 11793 (Rossell)].

2114. Pennsylvania identifies students as English learners by first distributing surveys asking families to state the child’s first language, the language spoken at home, and the language the parent speaks to the child. The process may also involve an interview with the family. The final step is an English proficiency test. [2/3/22 N.T. at 11813-14 (Rossell)].

2115. There are two English proficiency tests for kindergarten students – KW and KN – and a different test for grades 1 through 12 – the WIDA test. Students who score above a cut score are not classified as English learners, and students who score below a cut score are classified as English learners. The cut scores differ slightly from one state to the next. [2/3/22 N.T. at 11814-15 (Rossell)].

2116. Once a student is classified as an English learner, Pennsylvania uses the ACCESS for ELL 2.0 test and the PSSA to assess the student. [2/3/22 N.T. at 11815 (Rossell)].

2117. The ACCESS for ELL 2.0 test is an English proficiency test administered annually and intended to assess whether a student is ready to be re-designated as fluent English proficient. [2/3/22 N.T. at 11815-16 (Rossell)].

2118. The ACCESS for ELL 2.0 test is scored on a scale of 100 to 600, which is then converted to a score of 1 to 6. When mapped on a graph, the results of the ACCESS for ELL 2.0 test generally creates a bell curve, where most students score in the middle, and fewer students score at the top and bottom. [2/3/22 N.T. at 11816-17 (Rossell)].

2119. PSSA scores, with respect to English learners in particular, display as a bell curve on English language arts but not on math and science, which some experts believe is a result of the archaic and difficult language that is part of math and science, which is particularly challenging for English learners to comprehend. [2/3/22 N.T. at 11847 (Rossell); LRD2-00003, LRD2-00004].

2120. Dr. Rossell observed thousands of standardized test results in 15 to 20 states and noted that they generally generate bell curves. [2/3/22 N.T. at 11850-51 (Rossell)].

2121. Using standardized test scores to evaluate the quality of education is a misuse of the data because standardized tests are designed to always produce a bell curve where

half of test takers score above a midpoint and half score below. [2/3/22 N.T. at 11858, 11882-83 (Rossell)].

2122. Standardized test questions are field tested with the aim of generating questions that not every student will get right or wrong. [2/3/22 N.T. at 11861-62 (Rossell)].

2123. Standardized tests are designed to create a bell curve because they are intended to differentiate students and rank order them. [2/3/22 N.T. at 11869-70 (Rossell)].

2124. A discriminating item on a standardized test means that the item differentiates students by some students getting the question right and other students getting the question wrong. [2/3/22 N.T. at 11872-73 (Rossell)].

2125. Dr. Rossell opined that about 25 percent of achievement on standardized tests is explained by schools. The remainder is explained by what goes on in the home, the child's genes, and the community. [2/3/22 N.T. at 11883, 11892 (Rossell)].

2126. With respect to English learners, as their scores increase, the English-learner designation is removed. Standardized test scores for English learners, therefore, always and only show the lowest scores, which makes them flawed measures of the quality of English learner education. [2/3/22 N.T. at 11885-86 (Rossell); LRD2-00013, LRD2-00014].

2127. Economically disadvantaged students typically score lower on standardized tests than non-economically disadvantaged students. [2/4/22 N.T. at 12069 (Rossell)].

2128. It is difficult to differentiate a need for special education from a lack of English proficiency. [2/4/22 N.T. at 12072 (Rossell)].

ii. Jason Willis

2129. In his tenure with WestEd, Mr. Willis has worked with well over a dozen-and-a-half states and dozens more school districts across the country to help those entities rethink how they use resources in the context of serving children. Recently, Mr. Willis has worked with

states such as California, Maryland, North Carolina, Kansas, Arkansas, New Mexico, Nevada, Utah, and Delaware. [2/10/22 N.T. at 12675-76 (Willis)]. As part of his work with WestEd, Mr. Willis has conducted several adequacy studies. [2/10/22 N.T. at 12676–77 (Willis)]. Mr. Willis is clearly qualified as an expert in the area of school financing and financial data analysis. [2/10/22 N.T. at 12685–86 (Willis)].

2130. WestEd works as a collaborative team, so that individuals with different skill sets can contribute to the overall analysis and findings. In his analysis for this case, Mr. Willis was assisted by several other members of the WestEd team. However, all of the work was conducted under his supervision and the opinions offered were his own. [2/10/22 N.T. at 12689 (Willis)].

2131. Mr. Willis provided several expert opinions which were helpful to the Court’s evaluation of the evidence presented at trial.

2132. Mr. Willis disagreed with Petitioners’ characterization that “Respondents have adopted an irrational and inequitable school financing arrangement that drastically underfunds school districts across the Commonwealth,” and, as he explained, a significant portion of Pennsylvania’s budget is invested in public education and its funding of education has increased over time; Pennsylvania’s investment in public education, is substantially higher than the national average and many of its peer states; and, over the course of the past five to six years, it is clear that Pennsylvania has taken concrete steps to address issues regarding the equitable distribution of funding through the adoption of the new Fair Funding Formula. [2/10/22 N.T. at 12688, 12703-04 (Willis)].

2133. Utilizing a common statistical method known as synthetic control analysis, WestEd looked at the allocation of state resources to Pennsylvania school districts both prior to

and after the implementation of Act 35. As Mr. Willis opined, since Act 35 was enacted, there has been a shift towards providing more state funding to lower wealth, higher need communities. [2/10/22 N.T. at 12691-92, 12810-15 (Willis)]. This trend has increased in recent years as more dollars have been added to the Commonwealth’s education budget and have passed through the Fair Funding Formula. [2/10/22 N.T. at 12815 (Willis)].

2134. As Mr. Willis opined, although Pennsylvania, as compared to other states, derives a relatively high proportion of its public school revenues from local sources, looking at Pennsylvania’s ranking in terms of the percentage of revenue derived from state versus local sources is not a particularly meaningful factor in considering Pennsylvania’s commitment to funding public education. [2/10/22 N.T. at 12792-93 (Willis)]. Specifically, the proportion of total funding that comes from local revenues “has no bearing on the academic achievement overall or among student groups for states that we looked at.” [2/10/22 N.T. at 12793 (Willis)].

2135. Moreover, focusing on the percentage of revenues derived from state sources, rather than the total amount of dollars spent on education, obscures the big picture. Even if State funding were looked at in isolation, the amount of Commonwealth funds that Pennsylvania spends on public education is in the “middle of the pack” as compared to its peer states. [2/10/22 N.T. at 12792 (Willis)]. As Mr. Willis opined, when state revenues are added to Pennsylvania’s significantly above-average local funding for public schools, Pennsylvania does “really well” with respect to “overall funding compared to [its] peers and overall funding effort.” [2/10/22 N.T. at 12794-95 (Willis)].

2136. As Mr. Willis also noted, Pennsylvania’s General Assembly has enacted laws that allow school districts to assess a number of different types of local taxes and, compared to other states, Pennsylvania is relatively diverse in the types of local tax revenues that are able to

be raised, which gives local school districts greater ability to raise revenue from sources other than property taxes. [2/10/22 N.T. at 12696-98, 12793-94 (Willis)]

2137. Mr. Willis reviewed NAEP scores and *Education Week's* Quality Counts reports and, as he opined, "Pennsylvania outperforms its peers" in national reading and math metrics and "has been making progress towards closing some of the poverty-based achievement gaps." [2/10/22 N.T. at 12699 (Willis)].

2138. In addition to the opinions discussed above, Mr. Willis also offered a vertical equity analysis, which looked at the amount of total funding going to school communities in each wealth ventile, and efficiency analyses on school spending for each of the Petitioner Districts and their selected peers. [2/10/22 N.T. at 12796, 12832-34 (Willis)]. During cross-examination, Mr. Willis was questioned regarding whether his conclusions on these topics were erroneous, in that they included school district revenues that were passed through to charter schools, while omitting charter school students from the total student count for those districts.

2139. Based on the testimony presented at trial, it appears that Pennsylvania's system for funding charter schools has sometimes led to confusion among education finance experts when it comes to how charter school students are accounted for in school finance calculations. For instance, Petitioners' expert, Dr. Johnson, could not remember whether he included charter schools in his chart showing per-pupil spending on teachers, and it became apparent through cross-examination that he did **not** include charter school expenditures for Philadelphia in a number of the per-pupil spending categories he calculated, therefore rendering such calculations inaccurate because the numerator includes only funding to the district, while both district and charter students were included in the denominator. [1/21/22 N.T. at 9831-48 (Johnson)]. Similarly, the Rutgers Education Law Center published a correction to its "Making

the Grade” Report after concluding that the student count data in some states, including Pennsylvania, did not include students who attended charter schools. [2/11/22 N.T. at 13048-49 (Willis)]. So, too, in calculating what he purported to be Pennsylvania’s total revenue per ADM, Dr. Kelly did not account for the federal funding that is given directly to the Commonwealth’s charter schools. [2/22/22 N.T. at 14576–77 (Kelly)].

2140. Even if the confusion regarding the treatment of charter schools creates questions regarding the accuracy of WestEd’s vertical equity and efficiency analyses, it does not impact upon the remainder of Mr. Willis’s conclusions, as set forth above.

iii. Dr. Abel Koury

2141. Dr. Koury has a Ph.D. in developmental psychology from the University of Pittsburgh. [2/15/22 N.T. at 13616-17 (Koury)]. He has worked in the field of data analytics – managing, understanding, evaluating, and reporting data – for about fifteen years. [2/15/22 N.T. at 13623 (Koury)].

2142. Dr. Koury’s growth analysis is discussed in Section XVIII.iii, *infra*.

iv. Max Eden

2143. Mr. Eden is a research fellow at the American Enterprise Institute, which is a non-profit, nonpartisan, public policy think tank. [2/14/22 N.T. at 13225–26 (Eden)]. Mr. Eden has focused his career and work on education policy, including school discipline, school culture, and school finance. [2/14/22 N.T. at 13228 (Eden)]. In his current role as a research fellow at the American Enterprise Institute, and his previous position at other similar entities, Mr. Eden drafts research reports, advises policymakers, and interfaces with the Federal Department of Education on various educational policies issues. [2/14/22 N.T. at 13229 (Eden)].

2144. As Mr. Eden opined, school spending in Pennsylvania has increased substantially over time and ranks among the highest in America. Pennsylvania’s overall spending

per kindergarten through twelfth grade student is substantially higher than the national average. [2/14/22 N.T. at 13330 (Eden)]. If Pennsylvania were a sovereign nation, its spending on public education would rank among the highest in the world. [2/14/22 N.T. at 13293 (Eden)].

2145. As Mr. Eden opined, poor students in Pennsylvania receive more per-pupil funding from the Commonwealth than non-poor students and Pennsylvania is one of the most progressive states in America when it comes to education funding. [2/14/22 N.T. at 13296–97 (Eden)].

2146. Mr. Eden challenged the Petitioners’ contention that it is irrational or unreasonable for the Pennsylvania General Assembly to adopt a budget without first attempting to determine what it would cost to provide an “adequate education.” [2/14/22 N.T. at 13294-95 (Eden)]. In his expert opinion, and the Court agrees, there is no defensible or credible way to assert with any strong degree of confidence that any set amount of spending will yield an articulable academic performance. [2/14/22 N.T. at 13360 (Eden)].

2147. Mr. Eden also opined, as discussed previously, that there are several important flaws in the 2007 Costing Out Study, which is inherently subjective and speculative. [2/14/22 N.T. at 13360–61 (Eden)].

2148. Additionally, Mr. Eden offered a response to Petitioner’s assertion that there is no compelling justification for a school financing system that is heavily dependent upon local taxes. As Mr. Eden testified that Pennsylvania’s long-standing tradition of local control over public schools, including education funding through both state and local tax dollars, is rational and reasonable. [2/14/22 N.T. at 13300–03 (Eden)]. Mr. Eden alluded in particular to a 2000 study in the Journal of Law & Economics, which found that funding systems that leaned more heavily on local rather than state revenue sources were more efficient. [2/14/22 N.T. at 13400-01 (Eden)].

2149. As Mr. Eden also opined, reasonable minds can differ regarding the question of whether additional financial resources boost students' academic achievement. [2/14/22 N.T. at 13308–10 (Eden)]. There have been a number of studies conducted on the topic of education funding and its effect on student academic achievement. There is a wide array of results of such studies, some of which imply that that higher education spending results in better student achievement, and some of which conclude that higher spending does not conclusively result in higher student achievement. [2/14/22 N.T. at 13404–08, 13431–35 (Eden)].

2150. As Mr. Eden noted, a comparison between the per-student funding in Utah versus New York illustrates how more spending per student does not necessarily result in better achievement results. [2/14/22 N.T. at 13387–88 (Eden)]. Utah spends about \$6,953 per student and New York spends about \$22,336 per student. Yet, when it comes to student achievement, as reported by the NAEP, students in Utah are exhibiting higher rates of proficiency than New York students in fourth grade reading and mathematics as well as in eighth grade reading and mathematics. [2/14/22 N.T. at 13388–89 (Eden)].

2151. Likewise, as studies and reviews of U.S. Census data and data from NAEP have shown, increased education funding has not led to increased academic achievement. [2/14/22 N.T. at 13348, 13354–55 (Eden)].

2152. Mr. Eden was careful to note that the fact that historical increases in spending have not been accompanied by increased academic achievement cannot alone answer the question of whether increased spending matters. Just as correlation does not imply causation, the lack of correlation does not imply the lack of causation. [2/14/22 N.T. at 13355 (Eden)]. However, this lack of correlation is something that a reasonable person considering the issue might take into account.

2153. Mr. Eden addressed the “paradigm shift” that had occurred with respect to research regarding the impact of increased spending on educational achievement and, as he noted, the consensus position “is not coequivalent with the truth.” [2/14/22 N.T. at 13405 (Eden)]. As Mr. Eden explained, “the old consensus position, as I think it’s reasonable to articulate it, was that money does not matter.” [2/14/22 N.T. at 13405 (Eden)]. The key study cited in support of that position was performed by Dr. Hanushek, one of Legislative Respondents’ experts in this case. [2/14/22 N.T. at 13405 (Eden)].

2154. The study most responsible for effectuating the consensus shift was the Jackson, Johnson & Persico study, co-authored by Petitioners’ expert witness, Dr. Johnson. [2/14/22 N.T. at 13408-09 (Eden)]. However, as Mr. Eden testified, there are many scholars who do not accept Dr. Johnson’s conclusions and who have articulated strong reasons why the science is not settled. [2/14/22 N.T. at 13408 (Eden)].

2155. One critique that has been offered to the Jackson, Johnson & Persico study is that it did not approximate a randomized control trial, because it was based on court-ordered funding increases, which are not necessarily randomized events. Court rulings do not exist in a vacuum and can themselves have a catalytic political effect. [2/14/22 N.T. at 13412-14 (Eden)].

2156. Another reason that some scholars have declined to accept the conclusions of the Jackson, Johnson & Persico study is that if increased education spending has the positive impact suggested, “then it makes where we are today kind of inexplicable,” since the steady increases in education spending over time should have resulted in higher achievement and a smaller achievement gap. [2/14/22 N.T. at 13420-21 (Eden)]. As Mr. Eden emphasized in this regard, the Jackson, Johnson & Persico study did not look at the effects of actual funding increases,

but rather assigned hypothetical values to how such money would have been spend. [2/14/22 N.T. at 13428-29 (Eden)].

2157. Critics have also pointed out that, under the law of diminishing marginal returns, even if increasing spending by \$1000 per student when education spending was at the level from the time that is the focus of the Jackson, Johnson & Persico study (\$4000-5000 per student), it would not necessarily have the same impact at today's much higher spending levels. [2/14/22 N.T. at 13424, 13427, 13436 (Eden)].

2158. As Mr. Eden testified, having reviewed "in a careful, forensic manner" the body of research surrounding the impact of increased educational spending on achievement, he is unable to offer an opinion to a reasonable degree of professional certainty on the broadly defined question of whether increased spending leads to improved academic results. [2/14/22 N.T. at 13404 (Eden)]. Instead, as he opined, "there is ample cause for people on both sides of the argument to believe that the other side is wrong, and that very reasonable and intelligent minds for very intrinsically interesting reasons hold opposite perspectives on this." [2/14/22 N.T. at 13404 (Eden)].

2159. Mr. Eden's expert opinion was helpful to the Court. One of the questions for the Court to determine is whether the school funding system established by the General Assembly is "reasonably related" to its constitutional duty to provide for the maintenance and support of a thorough and efficient system of public education to serve the needs of the Commonwealth. The Court finds Mr. Eden's opinion that reasonable and informed people can reach opposite conclusions regarding the impact of increased education spending on improving academic outcomes and closing achievement gaps to be consistent with the evidence presented at trial and relevant to this question. Specifically, Mr. Eden's testimony supports the position that a

reasonable legislator could endorse the current funding system and level of appropriations for public education, notwithstanding the competing argument that the current funding system is inadequate.

v. Dr. Eric Hanushek

2160. Dr. Eric Hanushek is currently employed by Stanford University where he is the current Paul and Jean Hanna Senior Fellow at the Hoover Institution. [02/16/2022 N.T. at 14081-82 (Hanushek)].

2161. Dr. Hanushek is a member of several academic research networks and organizations including the National Bureau of Economic Research and the IZA Institute of Labor Economics. Dr. Hanushek is also part of the managing board for CALDER, a national organization that does research on longitudinal data about schools. [02/16/2022 N.T. at 14083 (Hanushek)].

2162. Dr. Hanushek is a member of the American Economic Association, the American Education Finance Association, the Association of Public Policy Analysis and Management Econometric Society, the Society of Labor Economics, the American Education Research Association, and the International Institute of Public Finance. [02/16/2022 N.T. at 14083 (Hanushek)].

2163. Dr. Hanushek has been awarded the Yidan Prize for education research, “an international award for a very illustrious judging panel that is financed by a foundation in Hong Kong, and it’s designed to be the education equivalent of a Nobel Prize.” [02/16/2022 N.T. at 14088 (Hanushek)].

2164. As Dr. Hanushek explained, and for the reasons set forth in Section IV.F above, there is a fundamental problem with the assumption underlying costing-out studies because there is no empirical basis that allows one to take a given goal for achievement and translate that into some required spending amount to achieve that goal. [02/16/2022 N.T. at 14092 (Hanushek)].

The APA Costing Out Study, in particular, is not a reliable or trustworthy guide of what the Commonwealth should do, particularly if it wanted to improve the quality of its students. [02/16/2022 N.T. at 14090 (Hanushek)].

2165. As Dr. Hanushek explained, there have been “hundreds” of attempts to estimate the relationship between school resources and student outcomes. “The majority of the studies that have been done to look at this relationship don’t give any statistically significant or relationship. In other words, they don’t provide much confidence that there’s any relationship of the other studies that have been done; they actually range from some that suggest more resources might decrease student achievement to a number that suggests that resources in some cases might increase student achievement.” [02/16/2022 N.T. at 14093 (Hanushek)].

2166. In addition to his analysis on costing-out studies, Dr. Hanushek also ranked all 50 states in terms of performance on the NAEP exam in both 2005 and 2019 to provide an indication of where Pennsylvania fell nationally. As Dr. Hanushek found, there were significant improvements in the ranking of Pennsylvania compared to other states and what Pennsylvania was doing in its schools in that time period seemed to be more effective than what other states were doing. [02/16/2022 N.T. at 14140 (Hanushek); LRD6-00005].

2167. Based on his knowledge and experience, Dr. Hanushek explained that the research suggests that it’s more important how the funds are used over how much money is spent when working to improve student performance. [02/17/2022 N.T. at 14276-77 (Hanushek)].

2168. As Dr. Hanushek stated: “Education finance systems, in general just provide an amount of money that school districts can decide how it’s used, something with direction. But teacher salaries are effectively determined by the experience of teachers and the degree levels of teachers. It turns out that neither of those is systematically related to effectiveness

of teachers, and as a result, salaries are unrelated to the effectiveness of teachers. So that school finance models that are used to just increase all salaries having nothing to do with ensuring that effective teachers are in the schools.” [02/17/2022 N.T. at 14281 (Hanushek)].

2169. As Dr. Hanushek explained, the issue of class-size reductions has been widely-studied, but the evidence does not suggest that class-size reductions cause achievement levels to increase. In the majority of studies, researchers find no evidence that would instill any confidence that class size reduction matters. Notably, class-size reduction is very expensive. [2/17/22 N.T. at 14288-89 (Hanushek)]

2170. Over the past 60 years, expenditures per-pupil have quadrupled in real terms even after adjusting for inflation. However, unfortunately, this has not been accompanied by comparable improvements in student achievement as achievement has not gone up significantly and the achievement gap has not gone away. [02/17/2022 N.T. at 14295 (Hanushek)].

XVII. SCHOOLS ARE TAKING ON NON-MANDATED BURDENS

2171. Increasingly, schools in Pennsylvania and elsewhere are choosing to occupy roles that are outside of their traditional roles and functions in society. [1/14/22 N.T. at 8527, 8529 (Noguera)].

2172. For example, on its website, Panther Valley posted a document entitled “The Ever Increasing Burden on America’s Public Schools.” [11/16/21 N.T. at 718, 720 (McAndrew); LR-00206]. The document states, in part, as follows: “The contract between our communities and our schools has changed. It’s no longer ‘Help us teach our children.’ It’s ‘Raise our kids.’ No generation of teachers and administrators in history has had to fulfill this mandate. And each year, the pressure grows.” [LR-00206-00002].

2173. Schools are attempting to address “outside-of-school factors” that can hinder students in their learning. [1/14/22 N.T. at 8527, 8529 (Noguera)].

2174. Outside-of-school factors include poverty, food insecurity, home insecurity, and various types of trauma. [1/14/22 N.T. at 8523 (Noguera)].

2175. In addition to funding public education, the Commonwealth provides financial support for agencies and programs that can more directly address these out-of-school issues that might impact student learning. For instance, the Commonwealth's budget for 2021-22 includes funding for county child welfare (\$1.16 billion); early intervention (\$150.4 million); the children's health insurance program (\$62.1); autism intervention and services (\$27.2 million); local health departments (\$25.4 million); homeless assistance (\$18.4 million); services for children with special needs (\$1.7 million); and maternal and child health services (\$1 million). [LR-01809-00006 to 00008].

2176. On an increasing basis, as explained below, school districts in Pennsylvania and elsewhere are attempting to counteract the adverse effects of these factors by paying for and using "non-instructional supports," which include personnel like therapists, psychologists, health care workers, counselors, and social workers.

i. In-School Non-Instructional Supports

2177. The record reflects that Pennsylvania school districts pay and arrange for non-instructional supports to be present within their schools.

2178. Greater Johnstown, for example, has four "behavioral interventionists" at its elementary school, three at its middle school, and two at its high school, along with seven school counselors and school therapists at both the middle and high school. [12/3/21 N.T. at 2738, 2742, 2745–46, 3115; 12/7/21 N.T. at 3114–15 (Arcurio)]. Greater Johnstown also employs two full-time psychologists and a psychologist who is compensated on a per-diem basis. [12/7/21 N.T. at 3112–13 (Arcurio)].

2179. Lancaster employs about thirty-four school counselors and eleven psychologists. [12/16/21 N.T. at 5092–97 (Rau); Lopez Dep. at 39:15-40:12].

2180. Wilkes-Barre has four psychologists and three truancy officers. [1/25/22 N.T. at 10766-67 (Costello)].

2181. Panther Valley employs a psychologist and is seeking to hire another one. [11/15/21 N.T. at 358 (McAndrew)].

2182. Shenandoah Valley employs a social worker/behavior interventionist and is seeking to hire a second social worker. [12/8/21 N.T. at 3451–55 (Waite)].

2183. SDP has counselors in each of its schools. [LR-03124-00002]. It also operates the Support Team for Education Partnerships (“STEP”), a program through which it provides clinical social workers, case managers, family peer specialists, and school behavioral consultants to schools. [1/11/22 N.T. at 7913 (Hite)].

2184. William Penn provides its students with counseling and social work services, among numerous other in-school non-instructional supports. [01/10/2022 N.T. at 7610-11 (Becoats); LR-2331].

2185. These examples are merely illustrative. Each of the Petitioner-Districts and SDP also provides its students with a number of other in-school non-instructional supports, as detailed above in Sections VI and VII.A, respectively.

ii. Outside-of-School Non-Instructional Supports

2186. It is also becoming increasingly common for Pennsylvania school districts to pay for and use outside-of-school non-instructional supports.

2187. Lancaster, for example, employs three “cultural navigators,” who act as liaisons between its ELL students, their families, and the district’s teachers and administrators.

The cultural navigators, among other tasks, drive parents to and from school meetings and explain to parents what is taking place in the district's schools. [12/16/21 N.T. at 5085–87 (Rau)].

2188. Lancaster, likewise, employs about twenty Student and Family Resource Specialists (at least one per building), who not only provide mental health services to students within the district's schools, but also regularly provide support to families outside of school. [12/16/21 N.T. at 5090–91; 12/17/21 N.T. at 5412, 5414 (Rau)].

2189. Through its Families in Transition Program, which is focused on students and families who are experiencing home insecurity, Lancaster helps families to find housing and employment in the local community. [Lopez Dep. at 30:6-31:15; 12/17/21 N.T. at 5403 (Rau)].

2190. Lancaster, in addition, provides its economically disadvantaged students with uniforms, transportation, and internet hotspots, among other supports. [12/16/21 N.T. at 5059–60 (Rau)].

2191. Greater Johnstown recently purchased over 300 WiFi hotspots – not to be used in its schools, but instead to be installed in its students' households. [12/7/21 N.T. at 3083 (Arcurio)].

2192. Dr. Costello, Wilkes-Barre's Superintendent, testified about the challenges that homeless students face and stated as follows: "And our district does everything we possibly can to try to help these students, but they have tremendous barriers that have to be overcome." [1/25/22 N.T. at 10741-42 (Costello)]. Dr. Costello asserted that, if a school district's students and their families are experiencing housing problems, the district has the responsibility to provide them with resources to assist with those problems. [1/26/22 N.T. at 10890-91 (Costello)].

2193. Likewise, Mr. Stem, former PDE Deputy Secretary and Lancaster administrator, testified that school districts that serve large numbers of homeless students may

need to provide those students with clothing and laundry resources. [11/30/21 N.T. at 1763 (Stem)].

2194. These examples are merely illustrative of the ways in which the Petitioner-Districts and other Pennsylvania school districts supply students with outside-of-school non-instructional supports.

iii. Implications of Schools Taking on the Burdens

2195. Schools are generally not required to address outside-of-school factors and instead are doing so voluntarily. [1/14/22 N.T. at 8529-30 (Noguera)].

2196. Although certain students can benefit from social services, Petitioners failed to demonstrate, in an empirical manner, the specific impact that non-instructional supports can have on student achievement or learning, or how to determine when there is enough of any given support in place to realize the impact. Furthermore, Petitioner Districts have all provided certain non-instructional supports, including health and social services, to certain students who live in poverty and/or have experienced traumatic events outside of school.

2197. In this regard, Dr. Noguera testified that, among the studies and reports that have been conducted on the topic, there is no consensus as to whether class size can have a material impact on student learning. [1/14/22 N.T. at 8573 (Noguera)].

2198. Dr. Hanushek agreed. He noted that the issue of class-size reductions has been widely-studied. He explained that although, over time, class sizes across the United States have been dramatically reduced, the evidence does not suggest that this development has caused achievement levels to increase. In addition, there is a wide distribution of outcomes in the studies regarding how class size relates to achievement. In the majority of studies, researchers find no evidence that would instill any confidence that class size reduction matters, even though class size reduction is very expensive. [2/17/22 N.T. at 14288-89 (Hanushek)].

2199. Similarly, during the trial, Dr. Arcurio, Greater Johnstown’s superintendent, was unable to say exactly how many non-instructional supports her district should have in place in any of its schools. She was not able to articulate any objective standard that could be used to determine how many social workers Greater Johnstown should hire in order to improve its student academic outcomes. [12/7/21 N.T. at 3115–16, 3119 (Arcurio)].

2200. As Dr. Noguera testified, there are institutions in society that exist for the very purpose of addressing outside-of-school factors. [1/14/22 N.T. at 8525-26 (Noguera)].

2201. When it comes to knowledge, expertise, resources, and staff, school districts are not in a better position to address outside-of-school factors than the institutions in society that exist for the very purpose of addressing them. [1/14/22 N.T. at 8533 (Noguera)].

2202. As Dr. Noguera acknowledged, it is not irrational for a person to conclude that the institutions in society that exist for the very purpose of addressing outside-of-school factors should take the lead on that effort and schools, for their part, should focus on delivering educational content to students. [1/14/22 N.T. at 8534-35 (Noguera)].

2203. When schools attempt to do more and more to address outside-of-school factors, it can dilute their ability to deliver educational content to their students. [2/2/22 N.T. at 11511, 11513-14 (Anderson)].

XVIII. FAILURE TO PROVE CAUSATION

A. Impact of Funding

2204. Petitioners did not prove that simply directing additional funding to Pennsylvania school districts would result in improved educational outcomes in the Commonwealth’s public schools.

2205. The court acknowledges that the impact of school funding on student achievement is a question that is still being openly and vigorously debated within the fields of education and economics. This court is not in a position to decide that debate.

2206. More importantly for purposes of this case, the court finds that it is rational for the General Assembly to decide not to direct additional funding to public education – that is to say, funding that goes beyond the almost \$14 billion that it currently allocates for support of public schools. Determinations regarding how much funding should be allocated to K-12 public education in Pennsylvania are policy decisions for the General Assembly.

2207. As explained in the conclusions of law, for this reason, among others, the court will only determine whether Pennsylvania’s system of public education provides K-12 students with the opportunity to obtain a basic, standard education.

i. School Spending and Student Achievement

2208. For at least the past fifty years, there has been an ongoing debate within the field of education and economics regarding the impact of school funding on education. [2/17/22 N.T. at 14278 (Hanushek)].

2209. In 1966, the NCES, which was, at the time, part of the Office of Education in the U.S. Department of Health, Education, and Welfare, published a report on a massive survey that it had undertaken with regard to whether and to what extent educational opportunities are equal. The report is known as the “Coleman Report,” after its principal author, James S. Coleman. [James S. Coleman, Nat’l Ctr. for Educ. Stat. (Dep’t of Health, Educ., and Welfare/Off. of Educ.), OE-38001, Equality of Educational Opportunity (1966)].

2210. The Coleman Report is a well-known study about the relationship between school funding and student achievement. It concluded that school spending was unrelated to

student achievement. [1/21/22 N.T. at 9860 (Johnson)]. The Coleman Report was an influential study. [1/21/22 N.T. at 9686 (Johnson)].

2211. There have been hundreds of studies that try to measure the relationship between school resources and student outcomes. [2/16/22 N.T. at 14093; 2/17/22 N.T. at 14278 (Hanushek); 1/21/22 N.T. at 9684 (Johnson)].

2212. The studies that have examined the relationship, or lack of a relationship, between school spending and student achievement are inconsistent with one another. The majority of the studies do not show that there is a statistically significant relationship. Some of the studies suggest that increases in resources may lead to decreases in student achievement, some of them suggest that school funding has no impact on student achievement, and others suggest that increases in resources might increase student achievement. [2/16/22 N.T. at 14093 (Hanushek); 1/21/22 N.T. at 9684 (Johnson)].

2213. There is no dispute that the majority of the studies have concluded that there is not a clear and consistent relationship between educational spending and student achievement. [2/16/22 N.T. at 14093 (Hanushek); 1/21/22 N.T. at 9864 (Johnson); 1/20/22 N.T. at 9334-35 (Belfield)].

2214. There is no defensible or credible way to assert with any strong degree of confidence that any set amount of school spending will yield a given, articulable academic performance. [2/14/22 N.T. at 13360 (Eden)].

2215. In fact, in the decades following the release of the Coleman Report, researchers have extensively studied the effect of school spending on student academic performance and the conclusion from that report has been widely upheld. Petitioners' expert, Dr. Johnson, confirmed this point. [1/21/22 N.T. at 9860-61 (Johnson)].

2216. Likewise, as Petitioners' expert, Dr. Belfield, acknowledged, the general findings in the Coleman Report have "been replicated in virtually all of the studies done in ensuing decades." [1/20/22 N.T. at 9334 (Belfield) (confirming a quote from an article he authored.)].

2217. In recent years, some scholars have attempted to use new methodologies to study the impact of school spending on student achievement. In particular, some recent studies have examined whether the outcome of a court case can impact student achievement. [2/17/22 N.T. at 14289-91 (Hanushek); [1/21/22 N.T. at 9863 (Johnson)].

2218. In particular, the study that Jackson, Johnson, and Persico published in 2016 has essentially led to a re-opening of the debate regarding the impact of school funding on student achievement outcomes. [2/14/22 N.T. at 13408-09 (Eden)].

2219. However, the debate remains far from settled. [2/14/22 N.T. at 13408-09 (Eden); 2/17/22 N.T. at 14293-96 (Hanushek)].

ii. Problems with Dr. Johnson's Approach

2220. Along with his co-authors, Jackson and Persico, Dr. Johnson published a study in 2016 in which he contended that court-ordered school funding does, in fact, lead to increases in student attainment and lifetime earnings. [1/21/22 N.T. at 9627-29 (Johnson)].

2221. Dr. Johnson's 2016 study involves the use of a quasi-experimental design, in an attempt to approximate the impact of court-ordered school finance reforms on student attainment and lifetime earnings. [1/21/22 N.T. at 9908 (Johnson)].

2222. Based on his 2016 study, Dr. Johnson claimed at trial that a 20% increase in school funding would result in the elimination of two-thirds of the outcome differential between children from poor and non-poor families. [1/21/22 N.T. at 9627 (Johnson)].

2223. Dr. Johnson's study, however, is flawed in a number of respects.

2224. Most notably, Dr. Johnson's study ignores reality. As Dr. Hanushek explained in discussing studies like Dr. Johnson's, "the answers [from these studies] aren't credible. They just don't make any sense. It's like they're from a different world." [2/17/22 N.T. at 14291 (Hanushek)].

2225. As with all empirical work, it is important to ensure that the conclusions of a study make sense in relation to reality. [2/17/22 N.T. at 14294 (Hanushek)].

2226. While Dr. Johnson's study concluded that increasing per-pupil expenditures by 20% over time would significantly close the outcome gap between poor and non-poor students, there has been a 150% increase in real-world expenditures per-pupil (adjusted for inflation) over the time period of the study. And, in contrast to the predictions in Dr. Johnson's study, the attainment and achievement gaps have not closed, and student achievement scores have not increased significantly. [2/17/22 N.T. at 14293-95 (Hanushek)].

2227. As Mr. Eden explained, if Dr. Johnson's conclusions were correct, it would mean that there would be higher achievement overall, and the achievement gap would be smaller. However, these things have not occurred. [2/14/22 N.T. at 13408-09 (Eden)].

2228. Dr. Johnson himself acknowledged that even though, between 1970 and 2000, school funding more than doubled (after adjusting for inflation), the achievement gap did not disappear as he predicted. [1/21/22 N.T. at 9950 (Johnson)].

2229. In other words, the observed, real-world results don't match the results that Dr. Johnson predicted in his study. [2/17/22 N.T. at 14294 (Hanushek)].

2230. Dr. Johnson's 2016 study, moreover, is based on a relatively small sample of students – on average only about 310 students per state over several decades. In fact, other

researchers have noted that Dr. Johnson’s study is based on a fairly small sample size. [1/21/22 N.T. at 9878 (Johnson)].

2231. While Dr. Johnson used this data to assess the impact of court-ordered school finance reforms on students who are attending public schools, he also acknowledged that his data set did not include information regarding whether the individuals who he studied actually attended the schools that their local school districts operated, as opposed to other schools. [1/21/22 N.T. at 9884-85 (Johnson)].

2232. Dr. Johnson’s 2016 study also relies on the assertion that school financing reforms are exogenous events that are unassociated with the underlying school financing system. However, this assertion is questionable because court-ordered school finance reforms are not “random events” that lead to an unexpected influx of additional funding. [2/14/22 N.T. at 13412-14 (Eden)].

2233. Furthermore, Dr. Johnson’s study relied on a review of student attainment levels before and after the time that court-ordered school finance reforms occurred. His study depended on the timing of court-ordered school finance reforms. [1/21/22 N.T. at 9909 (Johnson)].

2234. Dr. Johnson acknowledged that his study was a “dose-response” quasi-experimental design that depended on the timing of court-ordered school finance reforms. He further acknowledged that if his study got the time of a “dose” wrong, it would impact the validity of the study. [1/21/22 N.T. at 9936 (Johnson)].

2235. There is no agreement within Dr. Johnson’s field (or the legal field) regarding when any given court-ordered school finance reform occurred – or if it occurred at all. As an example, Dr. Johnson repeatedly referenced a study that Drs. Lafortune, Rothstein, and Schanzenbach conducted (the “LRS Study”). But Dr. Johnson acknowledged that, in 23 out of 52

instances – or 44.2% of the time – the LRS study disagreed with his study regarding whether a court-ordered school finance reform occurred. [1/21/22 N.T. at 9919-20 (Johnson)].

2236. While Dr. Johnson claimed that the differences between his study and the LRS study were “minor,” in fact, the studies entirely disagreed with one another regarding whether a school finance reform ever occurred. [1/21/22 N.T. at 9919-26 (noting that the two studies disagreed with one another regarding whether a court-ordered school finance reform occurred in Alabama, Arizona, Connecticut (on two occasions), Idaho (on two occasions), Maryland, Michigan, Montana (on two occasions), New Hampshire, New Jersey (on three occasions), New Mexico, Oregon, South Carolina, Texas, and Washington (on two occasions). (Johnson); LR-03359].

2237. In addition, Dr. Johnson’s study only examined hypothetical or projected spending. It did not examine actual spending on schools. [1/21/22 N.T. at 9937 (Johnson)].

2238. In an article that he wrote about his study, Dr. Johnson acknowledged that when he replicated his study, but used actual spending figures instead of the hypothetical or projected ones, he got substantially different results. [1/21/22 N.T. at 9947-48 (Johnson)].

2239. In particular, Dr. Johnson wrote:

[Drs. Johnson, Jackson, and Persico] confirmed that our approach generates significantly different results than those that used observed increases in school spending by comparing our results to those we would have obtained had we used actual rather than predicted increases as our measure of changes in district spending.

For all outcomes, the results based simply on observed increases in school spending are orders of magnitude smaller than our estimates based on predicted [school finances reform]-induced spending increases, and most are statistically insignificant.

[1/21/22 N.T. at 9943 (Johnson)].

2240. Even if Dr. Johnson’s 2016 study were valid, there are significant issues with applying the results of that study within the current environment of school funding, because of the law of diminishing returns on investment. Dr. Johnson’s study focused on a time period that began about sixty years ago, when levels of school funding were significantly lower (even when adjusting for inflation). Accordingly, even if the results of Dr. Johnson’s study are valid for the earlier time period, there is no reason to believe that they are applicable in the current time period. [2/14/22 N.T. at 13422-24 (Eden)].

2241. In fact, Dr. Johnson’s study acknowledged these diminishing returns. [1/21/22 N.T. at 9696 (Johnson) (acknowledging that his study showed evidence of diminishing returns); 2/14/22 N.T. at 13424 (Eden)].

2242. Finally, although Dr. Johnson claimed that his study was supported by other research that a small group of individuals conducted in the field, the results of some of that research are contrary to his study. For instance, the LRS study found that school financing reforms had “no discernable effect . . . on statewide achievement gaps between high and low income students or between minority and white students.” [1/21/22 N.T. at 10014 (Johnson)].

2243. Dr. Johnson also recognized that the topic of school funding, and school funding litigation in particular, is a politically-charged issue. [1/21/22 N.T. at 9904 (Johnson)].

2244. For the reasons set forth above, the court does not credit the results of Dr. Johnson’s study, or similar studies from other researchers, as being more authoritative than the results of the bulk of the studies regarding the association between school spending and student achievement. This topic is one that has been debated for more than 60 years, and continues to be debated in both academia and political arenas. This court is not positioned to decide the debate –

rather, it simply acknowledges that the impact of school spending on student achievement is, indeed, still up for debate and that reasonable people can disagree.

2245. For purposes of this matter, the court finds that Petitioners did not show that, if Pennsylvania's public schools received more funding, it would result in an increase in student achievement.

iii. Dr. Koury's Growth Analysis

2246. Dr. Koury was the only expert witness who presented reliable testimony regarding whether there is a correlation between how much Pennsylvania school districts spend, on the one hand, and student success, on the other.

2247. In Pennsylvania, there is no clear relationship between how much school districts spend per student and student academic growth. [2/15/22 N.T. at 13626, 13647-48 (Koury)].

2248. In Pennsylvania, district-level current expenditures per ADM are either weakly correlated or unrelated to district-level average growth index measures, a point that holds true across multiple school levels, grades, and school years, even when controlling for cost of living and various demographic factors. [2/15/22 N.T. at 13626, 13647-48 (Koury)]. The correlations between average growth index and current expenditures per ADM are either weak or inconsistent – some correlations are positive, and others are negative. [2/15/22 N.T. at 13648 (Koury)].

2249. Although Dr. Koury identified a few instances in which there was a statistically significant relationship between spending and growth, the relationships were both positive and negative. In other words, in some instances, higher spending was associated with higher growth. In other instances, higher spending was correlated with lower growth. [2/15/22 N.T. at 13648, 13708-10 (Koury)].

2250. In the few instances in which Dr. Koury found a statistically significant relationship, the magnitude of the correlation was weak. The strongest correlation that he found in his analysis showed that, at most, district spending was correlated with 2.6% of student academic growth. [2/15/22 N.T. at 13648-49 (Koury)].

2251. With regard to student growth, Dr. Koury examined the average growth index (“AGI”) for school districts on the PSSA exams at every individual grade level that was available, and combined across grade levels. [2/15/22 N.T. at 13630 (Koury)].

2252. PDE maintains the AGI, which is a standardized metric that is used to compare academic growth among school districts. [2/15/22 N.T. at 13627, 13630-32 (Koury)].

2253. Academic growth shows change over time, based on where students start and where they are positioned a year later. [2/15/22 N.T. at 13626-27 (Koury)].

2254. Academic growth is different from achievement. Achievement measures a student’s results at a single point in time, but growth shows a student’s improvement over time. [2/15/22 N.T. at 13628-29 (Koury); LR-00661].

2255. Demographic factors are more likely to impact student achievement than student growth. Because the demographic factors are present in the student’s first score on an exam, as well as subsequent scores, academic growth essentially controls for those factors, which therefore have less of an impact on the growth score than a given achievement score. [2/15/22 N.T. at 13629-30 (Koury)].

2256. With regard to spending, Dr. Koury examined current expenditures per average daily member (or “CE per ADM”) and actual instructional expenditures per weighted average daily member (or “AIE per WADM”). Dr. Koury also adjusted his spending metrics based on cost of living. [2/15/22 N.T. at 13633-35 (Koury)].

2257. Dr. Koury's opinion is based on his analysis of the statistical relationship between education spending and student academic growth in Pennsylvania. Dr. Koury determined that there is no correlation between spending and growth in Pennsylvania. In conducting his analysis, Dr. Koury used scatterplots, Pearson correlations, independent T-tests, ANOVAs or general linear models, and ordinary least squared ("OLS") regression. [2/15/22 N.T. at 13633-38 (Koury)]. This methodology is generally accepted and used in the field of statistical data analysis. [2/15/22 N.T. at 13637 (Koury)].

2258. Dr. Koury's analysis related to the correlation between school district spending and student academic growth variables. Dr. Koury explained that a correlation is an association between two variables, but does not indicate whether one variable caused the other variable. Conversely, in an experiment, a causal relationship can only be detected if individuals have been randomly assigned to a treatment and there is a control group. [2/15/22 N.T. at 13638-39 (Koury)].

2259. While Dr. Koury studied the correlational relationship between education spending and student academic growth variables (rather than the causal relationship), for one variable to cause another, there needs to be an association between the variables. This phenomenon is known as the first law of finding causality. [2/15/22 N.T. at 13689 (Koury)]. Conversely, when two variables do not show an association with one another, it is unlikely that they are causally linked. [2/15/22 N.T. at 13736 (Koury)].

2260. Dr. Koury examined differences in spending between districts with high and low levels of student academic growth (*i.e.*, dark blue and red districts, respectively). The results of Dr. Koury's analysis showed that districts with high and low levels of growth were not spending different amounts. In fact, if there were differences between districts with high and low levels of

growth, those differences, as a general matter, were that districts with low levels of growth were actually in the top 25% of the spending distribution, not the other way around. [2/15/22 N.T. at 13649 (Koury)].

2261. Similarly, Dr. Koury examined differences in growth between districts with relatively higher and lower levels of spending. The results of Dr. Koury's analysis showed that within Pennsylvania there were no differences in spending amounts between districts with relatively higher and lower levels of growth. In fact, for 2013-14, his analytical results showed that about 39% of districts in the top 25 percent of spending showed average growth in the red (low) category. [2/15/22 N.T. at 13671-72 (Koury); LRD4-00018].

2262. In conducting his analysis, Dr. Koury controlled for demographic variables. When controlling for demographic variables, the results held: education spending was not related to student academic growth. [2/15/22 N.T. at 13651-52 (Koury)].

2263. Dr. Koury noted that, if he had used a spending measure that was weighted by student demographics, such as the percentage of students who live in poverty, such a measure would have turned those demographic variables into covariates. Accordingly, running an analysis that was weighted by demographics (like economic disadvantage) would have been the opposite of controlling for student demographics. [2/15/22 N.T. at 13847-48 (Koury)].

2264. Dr. Koury examined the correlations between academic growth and school district spending in connection with the 4th, 5th, 6th, 7th, and 8th grades for each subject tested on the PSSA in 2013-14. Except in limited instances, Dr. Koury found no correlation between spending as measured by current expenditures per ADM and student academic growth. [2/15/22 N.T. at 13653-67 (Koury); Exhibits LRD4-00002 to -00017]. Dr. Koury's analysis of the

aggregated data for 4th through 8th grade held when he used adjustments for geographic cost of living differences to conduct the analysis. [2/15/22 N.T. at 13667-69 (Koury)].

2265. When Dr. Koury controlled for student demographic variables, his analysis for 2013-14 led to the same result: spending was not related to student academic growth. [2/15/22 N.T. at 13675 (Koury)].

2266. In addition, for the 2014-15 school year, Dr. Koury added an analysis of actual instructional expenditures per weighted average daily membership. [2/15/22 N.T. at 13681 (Koury)].

2267. The essential findings of Dr. Koury's analysis were replicated based on the 2014-15 spending and student academic growth data. Other than a small number of weak correlations that were not meaningful, Dr. Koury did not find a correlation between spending and student academic growth based on the data from 2014-15. [2/15/22 N.T. at 13682-94 (Koury); Exhibits LRD4-00022 to -00036].

2268. Again, for the 2014-15 school year, about 39% of districts spending in the top 25% of current expenditures per average daily membership showed red-level (low) growth in math. [2/15/22 N.T. at 13697-98 (Koury); Exhibit LRD4-00037].

2269. When Dr. Koury controlled for student demographic variables, his analysis for 2014-15 led to the same result: spending was not related to student academic growth. [2/15/22 N.T. at 13698-99 (Koury)].

2270. The essential findings of Dr. Koury's analysis were replicated based on the 2015-16 spending and student academic growth data. Other than a single weak correlation that was not meaningful, Dr. Koury did not find a correlation between spending and student academic growth based on the data from 2015-16. [2/15/22 N.T. at 13708-16 (Koury); Exhibit LRD4-

00040]. In fact, in his analysis of the 2015-16 school year, Dr. Koury found no statistically significant relationship between spending and average growth, except with regard to 5th grade math. For 5th grade math, Dr. Koury found a weak negative correlation between current expenditures per average daily membership and academic growth. As spending by school districts increased, growth in 5th grade math trended downward. [2/15/22 N.T. at 13708-10 (Koury); Exhibit LRD4-00040].

2271. When Dr. Koury controlled for student demographic variables, his analysis for 2015-16 reached the same result: spending was not related to student academic growth. [2/15/22 N.T. at 13715-16 (Koury)].

2272. The essential findings of Dr. Koury's analysis were replicated based on the 2016-17 spending and student academic growth data. Other than two weak correlations that were not meaningful, Dr. Koury did not find a correlation between spending and student academic growth based on the data from 2016-17. [2/15/22 N.T. at 13718-21 (Koury); Exhibit LRD4-00049]. In fact, in his analysis of the 2016-17 school year, the only statistically significant relationships that Dr. Koury found concerned 6th-grade English, and 4th through 8th grade English. In both cases, there was a negative correlation between spending and academic growth. [2/15/22 N.T. at 13718-21 (Koury); Exhibit LRD4-00049].

2273. When accounting for demographic factors, Dr. Koury did not find a statistically significant relationship between spending and average growth for the 2016-17 school year. [2/15/22 N.T. at 13726-28 (Koury)].

2274. The essential findings of Dr. Koury's analysis were replicated again based on the 2017-18 spending and student academic growth data. Other than a few weak correlations,

all of which were negative, Dr. Koury did not find a correlation between spending and student academic growth based on data from 2017-18. [2/15/22 N.T. at 13728-31 (Koury)].

2275. When controlling for demographic factors and geographic differences in cost of living, Dr. Koury did not find any statistically significant relationship between spending and average growth index based on the data from 2017-18. [2/15/22 N.T. at 13733-34 (Koury)].

2276. Petitioners' expert, Dr. Matthew Kelly, purported to offer a rebuttal of Dr. Koury's analysis. Dr. Kelly's rebuttal was largely based on the validity of value-added student academic growth metrics, such as the PVAAS scores that Dr. Koury used. [2/22/22 N.T. at 14517-18 (Kelly)].

2277. However, Dr. Kelly admitted that he is not an expert in the field of value-added academic growth metrics, such as PVAAS. [2/22/22 N.T. at 14592 (Kelly)]. In his scholarly works, Dr. Kelly does not discuss, or even mention, value-added growth metrics. [2/22/22 N.T. at 14590 (Kelly)]. In fact, outside of his rebuttal expert report in this case, Dr. Kelly had never previously researched value-added metrics. [2/22/22 N.T. at 14598 (Kelly)]. And Dr. Kelly admitted that when he conducted research for his rebuttal expert report in this case, he only reviewed articles in which the authors criticized the use of value-added metrics. [2/22/22 N.T. at 14606 (Kelly)].

2278. The court does not find Dr. Kelly's rebuttal of Dr. Koury persuasive.

2279. The court finds Dr. Koury's analysis persuasive.

iv. Dr. Johnson's Growth Analysis

2280. Dr. Johnson presented some testimony regarding an analysis of what he claimed to be growth data. Rather than analyzing data from PDE, Dr. Johnson used "learning rate" data from the Stanford Educational Data Archive (SEDA). [1/21/22 N.T. at 9806 (Johnson)].

Although Dr. Johnson referred to this data as “growth” data in his expert report and testimony, the SEDA refers to it as “learning rate” data. [1/21/22 N.T. at 9824-25 (Johnson)].

2281. Although Dr. Johnson created and used charts that refer to “Pennsylvania school districts,” SEDA data is not unitized based on Pennsylvania school districts, but rather based on what SEDA refers to as “geographic school districts.” Accordingly, Dr. Johnson only analyzed geographic school districts in Pennsylvania. [1/21/22 N.T. at 9811 (Johnson)].

2282. Geographic school districts are defined as “[t]he aggregate of all public schools, regardless of type and administrative control, residing in a geographic catchment area defined by a traditional public school district.” In other words, in Pennsylvania, a geographic school district embraces all students who attend charter schools and traditional public schools within a particular geographic area. [1/21/22 N.T. at 9811 (Johnson)]. Dr. Johnson did not know how, if at all, SEDA data addressed students who attend cyber charter schools.

2283. According to Dr. Johnson, in analyzing growth data, it is very important to use student-level growth data. [1/21/22 N.T. at 9825-26 (Johnson)]. However, Dr. Johnson admitted that the SEDA learning rate data, as presented in his report, is not based on individual student level data. [1/21/22 N.T. at 10014 (Johnson)]. Conversely, PVAAS student growth data, which Dr. Johnson did not use in his analysis, tracks growth at the individual student level. [1/21/22 N.T. at 9827 (Johnson)].

2284. Dr. Johnson also acknowledged that he did not know whether he accounted for charter school students in his learning rate analysis. [1/21/22 N.T. at 9847 (Johnson)]. Dr. Johnson acknowledged that, if he did not appropriately account for charter school students in the analysis, it would impact the reliability of the analysis. [1/21/22 N.T. at 9833-34 (Johnson)]. Dr. Johnson acknowledged, moreover, that he may have only looked at spending by traditional school

districts, even though he was comparing that with other data from entire geographic school districts (including charter schools). [1/21/22 N.T. at 9835 (Johnson)].

2285. Dr. Johnson's charts showed, inaccurately, that the SEDA geographic school district in Philadelphia County (including both the public school district and charter schools in the county) was spending significantly less per student than every other school district in Pennsylvania. However, as one example, data from PDE for 2010-11 showed that the SDP was spending an above-average amount in instructional expenses per ADM. [1/21/22 N.T. at 9838-43 (Johnson); PX-01959, "Exp. per ADM" Tabk, Col. F, Rows 400 and 503].

2286. In fact, between 2010-11 and 2019-20, SDP spent above average in instructional expenses per ADM in every year except the 2015-16 school year. [PX-01959, "Exp. per ADM" Tabk, Col. F, Rows 400 and 503; PX-01960, "Exp. per AMD" Tab, Col. F, Rows 400, 503; PX-01961, "2012-13 Exp per ADM" Tab, Col. F, Rows 400 and 503; PX-01962, "2013-14 Exp per ADM" Tab, Col. F, Rows 400 and 503; PX-01963, "2014-15 Exp per ADM" Tab, Col. F, Rows 400 and 503; PX-01965, "2016-17 Exp per ADM" Tab, Col. F, Rows 400 and 503; PX-01966, "2017-18 Exp per ADM" Tab, Col. F, Rows 400 and 503; PX-01967, "2018-19 Exp per ADM" Tab, Col. F, Rows 400 and 503; PX-01968, "2019-20 Exp per ADM" Tab, Col. F, Rows 400 and 503].

2287. The court does not find Dr. Johnson's testimony regarding the SEDA's learning rates data (or growth, as he refers to it) to be persuasive.

B. Flaws in Dr. Kelly's Statewide Analysis

2288. Because Petitioners presented testimony from witnesses representing only a very small percentage of Pennsylvania's system of public education, they sought to prove systemic inadequacy and inequity largely through the testimony of their expert witness, Dr. Kelly.

2289. Dr. Kelly did not speak to any school officials in the state to determine the resources that those officials think they need or want; did not conduct an individualized analysis of the educational opportunities that exist in each district; and did not investigate the educational results in any of the state’s school districts. [11/19/21 N.T. at 1343, 1360 (Kelly)].

2290. Instead, Dr. Kelly’s analysis focused largely on separating Pennsylvania’s school districts into quintiles. Dr. Kelly created five different wealth quintiles, each accounting for about 350,000 of Pennsylvania’s overall 1.7 million students. [11/19/21 N.T. at 1485–87 (Kelly)].

2291. As Dr. Kelly acknowledged, the terms “poorest districts” and “districts with the lowest spending” are not synonymous terms. When Dr. Kelly reported “On-Track Progress Measures” for districts across the state, he based his calculations on wealth, rather than spending, quintiles. He did not generate these reports with district spending quintile figures. [11/19/21 N.T. at 1473–76 (Kelly); LR-02021-00025 at Figures 8, 17a, and 17b].

2292. As Dr. Kelly recognized, when putting together quintiles, it is important to know which school districts are in each quintile. Yet, his report and his testimony did not identify the particular school districts that comprised each wealth quintile. [11/19/21 N.T. at 1489–901(Kelly)].

2293. Because school districts vary considerably in size, Dr. Kelly’s five wealth quintiles do not all contain the same number of districts. [11/19/21 N.T. at 1485-86 (Kelly)]. Of particular note, as Dr. Kelly acknowledged, SDP has about 140,000 students, thereby accounting for approximately 40% of the students in quintile 5, which is the poorest quintile. Dr. Kelly could not identify how many other districts were in quintile 5. [11/19/21 N.T. at 1488–89, 1494-95 (Kelly)].

2294. As Dr. Kelly acknowledged, because students attending the SDP comprised 40 percent of the poorest quintile, the results for that quintile could be skewed. For instance, as Dr. Kelly acknowledged, without SDP being included in quintile 5, the graduation rates for the quintile would likely be higher [11/19/21 N.T. at 1488–89, 1494 (Kelly)].

2295. Indeed, because of this potential skewing effect, another of Petitioners' experts, Dr. Johnson, testified that he has a practice of running analyses with and without large districts, such as Philadelphia, to make sure the results are not driven by a single district or single school. [1/21/22 N.T. at 9852-53 (Johnson)].

2296. Similarly, PDE has sometimes conducted separate analyses for “all school districts” and “school districts excluding Philadelphia” in recognition of the fact that SDP's size can lead to a single school district impacting the results for the entire State. For instance, in its Teachers' Equity Plan, PDE conducted separate analyses including and excluding SDP when examining the percent of sections taught by teachers on emergency certification and the percent of academic sections taught by highly qualified teachers disaggregated by wealth [PX-00002-00028, PX-00002-00033].

2297. PDE's analysis regarding the number of students in poverty taught by highly qualified teachers (“HQTs”) in its Teachers' Equity Plan demonstrates the impact that Philadelphia can have on statewide results. As PDE concluded, “[w]hen Philadelphia's HQT [high quality teacher] mean percentages are removed from all school district buildings, students in most core academic sections were taught by teachers that were HQ regardless of the poverty levels of the students.” By contrast, when Philadelphia was included, those percentages fell. [PX-00002-00034]. Because Philadelphia students comprise 40% of all students in quintile 5, the potential

for Philadelphia to skew the overall results for quintile 5 is even greater than its impact on statewide data as a whole.

2298. Dr. Kelly's analysis also looked only at school district outcomes and did not account for the more than 135,000 students who attend charter schools, including the approximately 80,000 charter school students residing in Philadelphia. Thus, his analysis excludes 40% of students living within the boundaries of the SDP. [Joint Stip. at ¶¶ 2-3].

2299. Because Dr. Kelly failed to conduct an individualized analysis of the educational opportunities that exist in any individual school district, did not analyze or account for the impact of Philadelphia on the overall results for quintile 5 in his statistical analysis, and based his analysis on wealth quintiles rather than school spending, his analysis does not support Petitioners' contention that the Pennsylvania General Assembly has failed to adequately provide for the maintenance and support of a thorough and efficient system of public education to serve the needs of the Commonwealth.

2300. Further, Dr. Kelly's analysis of career and college readiness measures by wealth quintile indicates that a relatively high percentage of students are succeeding on these measures across all wealth quintiles, and the gaps between wealth quintiles are relatively modest in most categories. These gaps shrink even more when excluding quintile 5, which includes SDP and may therefore cause distortion. [PD-00003-0073].

2301. For instance, according to Dr. Kelly's analysis, five-year high school graduation rates ranged from 88.21% in quintile 5 to 96.04% in quintile 1. All quintiles other than quintile 5 had five-year graduation rates of at least 92.42%. [PD-00003-0073].

2302. The industry-based learning metric showed no apparent correlation to school district wealth quintile. From highest to lowest by quintile, Dr. Kelly's results were:

quintile 2 (36.11%), quintile 4 (35.96%), quintile 1 (32.94%), quintile 5 (29.59%), quintile 3 (28.01%). [PD-00003-0073].

2303. The rigorous courses of study metric indicated that 54.06% of students in quintile 5 took at least one rigorous course of study, compared to 58.54% in quintile 3 and 68.06% in quintile 1. [PD-00003-0073].

2304. The percentage of students making a postsecondary transition to school, work or the military ranged from 77.57% for quintile 5 to 88.81% for quintile 1, meaning that at least 77.57% of students in every wealth quintile made a postsecondary transition. [PD-00003-0073].

2305. The college and career standard with the most pronounced correlation to wealth, according to Dr. Kelly's analysis, is transition to postsecondary education, in which 78.35% of students in quintile 1 transitioned to post-secondary education, compared to 69.88% in quintile 2 and 52.13% in quintile 5. [PD-00003-0073]. But there are a large number of reasons that an otherwise prepared student might choose not to attend college. [1/19/22 N.T. at 9095-97 (Belfield); 01/18/2022 N.T. at 8814-15 (Ortega)]. These factors can create a greater barrier for economically disadvantaged students. [1/19/22 N.T. at 9095-96 (Belfield)]. Not every good job requires a college degree and college is not the right choice for every person. [1/19/22 N.T. at 9097 (Belfield)].

2306. Secretary Ortega further agreed that there are many students who graduate from high school in Pennsylvania who might be sufficiently prepared to go to college but they do not do so because they are unable to afford it. [01/18/2022 N.T. at 8815 (Ortega); PX-03338]. For these reasons, it cannot be assumed that students in any school district or demographic group who chose not to attend college were not sufficiently prepared to do so.

2307. While the career and college readiness measures, like the achievement measures, indicate continued room for improvement, they also reflect a public education system in which students attending school districts in all wealth quintiles have an opportunity to succeed. For instance, even before accounting for the potentially distorting impact of SDP, over 88% of students in quintile 5 districts graduate from high school in five years and over 77.5% make a postsecondary transition to college, work or the military.

2308. Petitioners have also failed to establish that career readiness differences by wealth quintile (or any other demographic group) are caused by the level of financial resources provided to school districts. For instance, PDE data indicates that, in 2016, 68.7 percent of female students enrolled in postsecondary education within 12 months after high school graduation as compared to only 57.6 percent of male students. Secretary Ortega agreed with the presumption that there is no difference between the financial resources of schools attended by female and male students in Pennsylvania and, therefore, the “gap” between male and female students must be explained by factors other than the amount of financial resources available to their schools. [01/18/2022 N.T. at 8812-13 (Ortega); PX-03338-0010].

2309. Similarly, in William Penn, the 2017-2018 high school graduation rate for female students was 82.20 percent while the graduation rate for male students was 64.68 percent. [01/06/2022 N.T. at 7108 (Harbert); PX-01697, “Grad Rate by LEA,” Line 570]. Yet as Ms. Harbert, the William Penn Superintendent at the time, agreed, the District did not provide greater resources to female students than it did to male students. [01/06/2022 N.T. at 7108 (Harbert)].

2310. During the 2019-2020 school year, William Penn School District’s graduation rate was 76.95 percent for black students; 80 percent for white students; and 92.86

percent for Hispanic students. [01/06/2022 N.T. at 7112 (Harbert); PX-01992, “Grad Rate by LEA”, Line 573].

2311. As Ms. Harbert acknowledged when asked if William Penn School District provided greater resources for Hispanic students than it did for White or Black students during the 2019-2020 school year: “We would have provided the same resources for all of our subgroups.” [01/06/2022 N.T. at 7112-13 (Harbert); PX-01992].

2312. For similar reasons, Dr. Kelly’s achievement analysis – which was based on school district wealth rather than funding levels – is insufficient to establish that those gaps were caused by inadequate funding, as opposed to community, family, economic or personal factors, which are more prevalent in lower wealth districts, or other factors, like the ways in which districts spend their funds.

2313. As discussed in more detail in Section XVI.A.iv, above, even Petitioners’ own expert witness on the topic of poverty’s impact on education agreed that ACEs that are highly correlated with poverty result “in harmful effects to brain functioning and imped[ing] cognitive functions causing trouble with attention, concentration, memory, and creativity.” [01/14/2022 N.T. at 8538-40 (Noguera)]. As Petitioners’ expert, Dr. Noguera, indicates in his report, research suggests that approximately two-thirds of the variation in student achievement can be explained by out-of-school factors. [01/13/2022 N.T. at 8408 (Noguera)].

2314. Data maintained by PDE and admitted as evidence in this case shows several examples of districts with similar funding levels who have different results on standardized assessments.

2315. For instance, the most recent PDE data shows, Greater Johnstown’s annual total revenue per ADM is \$17,325.45, while neighboring Windber Area School District

(“Windber”) spends \$3,000 less per ADM. However, Windber students score “proficient” or “advanced” on standardized tests at higher rates than Johnstown students. [12/7/21 N.T. at 3179, 3181, 3183-85 (Arcurio); PX-02135, “2019-20 Rev per ADM” Tab, Lines 132 & 432; LR-01834-00001 to 00002].

2316. Other examples of lower funded school districts that achieve higher standardized test scores include:

a. Tyrone Area SD, which ranks 495 out of 500 in total revenue per ADM. Tyrone High School has proficient/advanced percentages of 93.6% in ELA, 90.4% in Math and 94.4% in science. [PX-02135, Tab 3, Line 97; LR-01831-00001, 00002].

b. Abington Heights SD, which ranks 491 in total revenue per ADM. Abington Heights High School has proficient/advanced percentages of 94.6% in ELA, 87.0% in Math and 90.9% in science. [PX-02135, Tab 3, Line 269; LR-01813-00001, 00002].

c. Mars Area SD, which ranks 487 in total revenue per ADM. Mars Area High School has proficient/advanced percentages of 91.5% in ELA, 80.8% in Math and 87.2% in science. [PX-02135, Tab 3, Line 121; LR-01822-00001,00002].

d. Palmyra SD, which ranks 482 in total revenue per ADM. Palmyra Senior High School has proficient/advanced percentages of 90.9% in ELA, 90.5% in Math and 88.2% in science. [PX-02135, Tab 3, Line 308; LR-01824-00001,00002].

e. Norwin SD, which ranks 496 in total revenue per ADM. Norwin High School has proficient/advanced percentages of 84.9% in ELA, 74.0% in Math and 77.9% in science. [PX-02135, Tab 3, Line 480; LR-01823-00001,00002].

2317. Certainly, the performance of these low spending, high testing districts cannot simply be chalked up to economic advantage. For instance, Tyrone (Blair County) ranks

number 172 in percentage of economically disadvantaged students, while Windber (Somerset County) ranks number 181. [PX-04806-00003, 00004].

2318. In any event, comparing the achievement scores based on wealth quintile rather than funding level drives home the point that unsatisfactory standardized test scores are more closely correlated with poverty than they are with spending. It further illustrates why – outside of this courtroom – representatives of Petitioner Districts regularly decry the unfairness of using standardized test scores to judge the quality of the education they provide to their students. This helps to explain why a school district like Lancaster can have unsatisfactory test results even though it ranks number 88 out of 500 in total revenue per ADM, offers one of the broadest and deepest academic programs among public schools in Pennsylvania, and boasts that its high school “sets the standard for excellence in urban education.” [PX-02135, Tab 3, Line 288; LR-3199-00016].

2319. Dr. Kelly’s needs-adjusted analysis is consistent with this point. For instance, as Dr. Kelly testified, William Penn had the highest needs-adjusted revenues per ADM of all of the Petitioner Districts, yet its standardized assessment performance among the Petitioners was lowest in math/algebra and second lowest in ELA/literature and science/biology. [11/19/21 N.T. at 1462-63 (Kelly)].

2320. In addition, funding and spending levels cannot, in and of themselves, dictate the quality of educational experiences and levels of student learning and achievement. Rather, the manner in which school districts choose to spend their money has a significant impact on these matters. This point is discussed in greater detail below.

C. Funding Choices Made By Petitioners and Other Pennsylvania School Districts

i. School District Spending Choices Have A Significant Impact On The District

2321. Numerous witnesses, both expert and fact, agreed that the manner in which a school district spends its funds has a significant impact on the district. [2/16/22 N.T. at 14093 (Hanushek); 1/21/22 N.T. at 9947-48 (Johnson); 12/1/21 N.T. at 2038-40 (Stem); 12/13/21 N.T. at 24419 (Molchanow); Ortega Dep. at 137:18-23].

2322. For instance, as Dr. Hanushek testified, all of the applicable research suggests that how education funds are used is more important than how much education funding is spent. 2/16/22 N.T. at 14093 (Hanushek)].

2323. Dr. Johnson agreed that the manner in which funding is used is significant. [1/21/22 N.T. at 9955 (Johnson)]. Dr. Johnson agreed that simply spending additional funding on, for instance, a new football stadium would not lead to positive changes in student achievement. [1/21/22 N.T. at 9955-56 (Johnson)].

2324. Secretary Ortega agreed that it is necessary to make sure that money is spent properly and that schools are implementing programs that actually work, as opposed to outdated methodologies. [Ortega Dep. at 137:18-23].

2325. The Court finds credible all of this testimony that the manner in which a school district spends its funds has a significant impact on the district.

2326. Mr. Stem testified that PDE believes that additional funding should be directed to the particular supports that the agency has identified. Mr. Stem stated that funding should be directed to items for which PDE advocates, rather than other uses, such as increasing a superintendent's salary. [12/1/21 N.T. at 2038-40 (Stem)].

2327. However, despite PDE's claim that Pennsylvania's system of education requires more funding, it has never actually evaluated how the Commonwealth's school districts use their funding. [12/1/21 N.T. at 2039-40 (Stem)].

2328. Some school districts are more efficient in spending their funding than others. For instance, in his book, *Economic Principles for Education*, Petitioners' expert Dr. Belfield noted that the efficiency of school districts in the United States has been studied. The study of school district efficiency has shown that "schools in the neediest districts have the lowest average efficiency score and those in the wealthiest districts, the highest." [1/20/22 N.T. at 9275 (Belfield)].

2329. In addition, as stated by Dr. Belfield, "Overall, competitive effects have a positive effect on performance within school systems." [1/20/22 N.T. at 9277 (Belfield)].

2330. Within the field of education and economics, there are a variety of opinions regarding the best ways for schools to use funding. [1/21/22 N.T. at 9955 (Johnson)]. Some school districts seem to use money effectively and an equal number do not. [2/17/22 N.T. at 14277 (Hanushek)].

2331. The Petitioners failed to introduce expert testimony regarding how any of the Petitioner Districts are spending their funding.

2332. The Petitioners also failed to introduce any evidence regarding how school districts or LEAs across the Commonwealth, other than the Petitioner Districts, SDP, Otto-Eldred, and Springfield Township, are spending their funding. [See, e.g., 1/21/22 N.T. at 9957-58 (Johnson) (Dr. Johnson acknowledged that he had not studied the issue of how Pennsylvania school districts are spending their funding.)].

2333. Accordingly, there is no evidence in the record regarding the spending decisions of any school districts other than the Petitioner Districts, SDP, Otto-Eldred, and Springfield Township.

2334. Even if Petitioners had shown that additional school funding results in increased student achievement (which they did not do), without knowing how Pennsylvania school districts are currently spending their funding, the court would be unable to determine whether any of them lacks sufficient funding.

2335. In particular, because Petitioners failed to present evidence regarding how other Pennsylvania school districts are spending their funding, the court is unable to determine whether those districts have taken plausible cost-saving measures.

2336. Likewise, the record is devoid of evidence regarding whether non-testifying Pennsylvania school districts are spending their funding on items that are not necessary to a basic, standard education.

2337. Because the Petitioner Districts, SDP, and Otto-Eldred are not representative of other school districts or LEAs across the Commonwealth, the court cannot impute the spending patterns for these eight districts to any other school district or LEA.

2338. In fact, other than testimony from the representatives of school districts and charter schools who testified at trial, the record is devoid of evidence regarding which other school districts and LEAs, if any, believe that they require additional funding in order to provide a constitutionally-sufficient education to their students.

2339. Moreover, one of the school districts that testified, Springfield Township, and both of the charter schools that testified, Commonwealth Charter Academy and 21 Century,

stated that their schools are already providing their students with an adequate education. [1/25/22 N.T. at 10559 (Hacker); 2/8/22 N.T. at 12403 (Flurie); 2/16/22 N.T. at 13962 (Cote)].

2340. To the extent that there are any other school districts or LEAs across the Commonwealth that believe that they require additional funding in order to provide a constitutional basic education, the Petitioners failed to introduce evidence regarding how those districts and LEAs spend their funding and therefore the court cannot determine whether they have taken all plausible cost-cutting measures.

2341. Moreover, “Petitioners acknowledge that some school districts may have poor test results due to ‘local mismanagement or ineffective teachers,’ even where the General Assembly has allocated the resources necessary to provide the education that the legislature itself has demanded.” [*William Penn II*, 170 A.3d at 447].

ii. Petitioner District Spending Choices

2342. The court finds that even the Petitioner Districts do not spend their funding in the most efficient manner and have not taken all plausible cost-cutting measures.

2343. For instance, all of the Petitioner Districts spend funding on various non-instructional items. In 2020, according to PDE data that is based on the districts’ annual financial reports, the Petitioner Districts spent \$7,346,847.09 total on non-instructional items. [PX-01968, “2019-20 Expenditures” Tab, Row 132 (Greater Johnstown, \$928,019.00); Row 142 (Panther Valley, \$405,488.66); Row 217 (William Penn, \$1,547,790.00); Row 288 (Lancaster, \$2,362,224); Row 326 (Wilkes-Barre, \$1,788,527.36); and, Row 416 (Shenandoah Valley, \$314,798.07)].

2344. Although the record is replete with examples of spending decisions that the Petitioner Districts made that represent inefficient spending and failures to optimize resources and budgets, it is useful to highlight some of the examples:

a. Greater Johnstown recently chose to spend \$393,751.00 to replace its football stadium lights. [12/8/21 N.T. at 3262 (Arcurio); LR-01887, “ESSERS II” Tab, Row 41].

b. Lancaster chose to purchase iPads and Apple products for its students instead of Chromebooks, which are used by many other school districts across the Commonwealth. Chromebooks are materially less expensive, costing about \$250 less per unit than iPads. [12/20/21 N.T. at 5948-51 (Przywara)].

c. In 2022, Panther Valley chose to add 37 new courses to its high school course list, including courses in Broadcast Journalism, Monsters in Literature, International Business, Introductions to Urban Art, and Cinema in History. [11/15/21 N.T. at 396-398 (McAndrew); LR-01693; PX-6000]. It purchased all of the curricula and supplies that are necessary to offer those courses. [11/15/21 N.T. at 401 (McAndrew)].

d. Between 2016 and 2020, Shenandoah Valley chose to increase its general fund balance. During that timeframe, the district has added, on average, \$700,000 per year to its general fund balance. The general fund balance increased from approximately \$2.3 million to \$5.8 million. [12/9/21 N.T. at 3563 (Waite); LR-03196].

e. Wilkes-Barre is undertaking repairs to the domed roof over its swimming pool at Kistler Elementary School. [1/26/22 N.T. at 10996 (Costello)]. In addition to the pool at Kistler Elementary, Wilkes-Barre also built an eight-lane pool at its new high school. The district intends to use its second pool for student athletics and as a community pool for community engagement purposes. [1/26/22 N.T. at 10828-30 (Costello)]. The cost for the pool at the new high school was approximately \$1-2 million. [1/26/22 N.T. at 11020 (Costello)].

f. Wilkes-Barre also chose to delay the consolidation of the athletic programs at its three former high schools, even though doing so ultimately generated a cost savings of \$600,000 and the district was aware that it was going to consolidate its high schools. Instead of consolidating the athletic programs, Wilkes-Barre made staffing reductions to reduce its expenses. [1/26/22 N.T. at 11103-05 (Costello)].

2345. Additionally, as discussed above, several Petitioners have chosen to increase their fund balances and budgetary reserves.

2346. The above examples reflect spending choices that Petitioner Districts made in order to allocate their funding to purposes other than providing what the Petitioners themselves claimed to be necessary educational resources.

2347. The Petitioner Districts themselves have failed to take all plausible cost-saving measures.

2348. While it is not for the court to decide how Petitioner Districts spend their money, or to evaluate the wisdom of those expenditures, the Court has been asked to determine that the General Assembly has violated the Constitution by failing to provide Petitioner Districts and other school districts throughout Pennsylvania with sufficient funding to offer their students the opportunity to obtain an adequate basic education. This Court cannot reach such a finding where the evidence shows Petitioner Districts are spending funds on programs, interventions, and non-instructional items beyond what is necessary to provide their students with an adequate basic education, and have failed to take all plausible cost-saving measures.

XIX. WHAT PETITIONERS FAILED TO PROVE

2349. In this case, Petitioners are pursuing a facial challenge to Pennsylvania's system of K-12 education financing. They are challenging the constitutionality of the system as a whole. [Petition for Review 313-315, 317-321 (seeking declaratory and injunctive relief related

to Pennsylvania’s K-12 school financing arrangement generally); *William Penn II*, 170 A.3d at 425 (“Generally, Petitioners aver that Pennsylvania’s school funding system is flawed on its face[.]”).

2350. Petitioners are not prosecuting an as-applied challenge to Pennsylvania’s system of K-12 education financing. *Id.*

2351. Petitioners introduced direct, first-hand evidence (*i.e.*, testimony from a witness who has direct and personal knowledge of something or documentary or other evidence that directly addresses the topic) about the current educational offerings opportunities at the Petitioner Districts, the SDP, Otto-Eldred, and Springfield Township, which comprise only nine of the Pennsylvania’s 499 operating school districts (1.8% of school districts).

2352. Petitioners failed to introduce direct, first-hand evidence about the educational offerings that are currently available at the other 490 school districts in Pennsylvania.

2353. In particular, Petitioners failed to introduce direct, first-hand evidence about the educational offerings that are currently available at the following Pennsylvania school districts: Abington Heights School District; Abington School District; Albert Gallatin Area School District; Aliquippa School District; Allegheny Valley School District; Allegheny-Clarion Valley School District; Allentown City School District; Altoona Area School District; Ambridge Area School District; Annville-Cleona School District; Antietam School District; Apollo-Ridge School District; Armstrong School District; Athens Area School District; Austin Area School District; Avella Area School District; Avon Grove School District; Avonworth School District; Bald Eagle Area School District; Baldwin-Whitehall School District; Bangor Area School District; Beaver Area School District; Bedford Area School District; Belle Vernon Area School District; Bellefonte Area School District; Bellwood-Antis School District; Bensalem Township School District;

Benton Area School District; Bentworth School District; Berlin Brothersvalley School District; Bermudian Springs School District; Berwick Area School District; Bethel Park School District; Bethlehem Area School District; Bethlehem-Center School District; Big Beaver Falls Area School District; Big Spring School District; Blackhawk School District; Blacklick Valley School District; Blairsville-Saltsburg School District; Bloomsburg Area School District; Blue Mountain School District; Blue Ridge School District; Boyertown Area School District; Bradford Area School District; Brandywine Heights Area School District; Brentwood Borough School District; Bristol Borough School District; Bristol Township School District; Brockway Area School District; Brookville Area School District; Brownsville Area School District; Burgettstown Area School District; Burrell School District; Butler Area School District; California Area School District; Cambria Heights School District; Cameron County School District; Camp Hill School District; Canon-McMillan School District; Canton Area School District; Carbondale Area School District; Carlisle Area School District; Carlynton School District; Carmichaels Area School District; Catasauqua Area School District; Centennial School District; Central Bucks School District; Central Cambria School District; Central Columbia School District; Central Dauphin School District; Central Fulton School District; Central Greene School District; Central Valley School District; Central York School District; Chambersburg Area School District; Charleroi School District; Chartiers Valley School District; Chartiers-Houston School District; Cheltenham School District; Chester-Upland School District; Chestnut Ridge School District; Chichester School District; Clairton City School District; Clarion Area School District; Clarion-Limestone Area School District; Claysburg-Kimmel School District; Clearfield Area School District; Coatesville Area School District; Cocalico School District; Colonial School District; Columbia Borough School District; Commodore Perry School District; Conemaugh Township Area School District;

Conemaugh Valley School District; Conestoga Valley School District; Conewago Valley School District; Conneaut School District; Connellsville Area School District; Conrad Weiser Area School District; Cornell School District; Cornwall-Lebanon School District; Corry Area School District; Coudersport Area School District; Council Rock School District; Cranberry Area School District; Crawford Central School District; Crestwood School District; Cumberland Valley School District; Curwensville Area School District; Dallas School District; Dallastown Area School District; Daniel Boone Area School District; Danville Area School District; Deer Lakes School District; Delaware Valley School District; Derry Area School District; Derry Township School District; Donegal School District; Dover Area School District; Downingtown Area School District; Dubois Area School District; Dunmore School District; Duquesne City School District; East Allegheny School District; East Lycoming School District; East Penn School District; East Pennsboro Area School District; East Stroudsburg Area School District; Eastern Lancaster County School District; Eastern Lebanon County School District; Eastern York School District; Easton Area School District; Elizabeth Forward School District; Elizabethtown Area School District; Elk Lake School District; Ellwood City Area School District; Ephrata Area School District; Erie City School District; Everett Area School District; Exeter Township School District; Fairfield Area School District; Fairview School District; Fannett-Metal School District; Farrell Area School District; Ferndale Area School District; Fleetwood Area School District; Forbes Road School District; Forest Area School District; Forest City Regional School District; Forest Hills School District; Fort Cherry School District; Fort LeBoeuf School District; Fox Chapel Area School District; Franklin Area School District; Franklin Regional School District; Frazier School District; Freedom Area School District; Freeport Area School District; Galeton Area School District; Garnet Valley School District; Gateway School District; General McLane School District;

Gettysburg Area School District; Girard School District; Glendale School District; Governor Mifflin School District; Great Valley School District; Greater Latrobe School District; Greater Nanticoke Area School District; Greencastle-Antrim School District; Greensburg Salem School District; Greenville Area School District; Greenwood School District; Grove City Area School District; Halifax Area School District; Hamburg Area School District; Hampton Township School District; Hanover Area School District; Hanover Public School District; Harbor Creek School District; Harmony Area School District; Harrisburg City School District; Hatboro-Horsham School District; Haverford Township School District; Hazleton Area School District; Hempfield Area School District; Hempfield School District; Hermitage School District; Highlands School District; Hollidaysburg Area School District; Homer-Center School District; Hopewell Area School District; Huntingdon Area School District; Indiana Area School District; Interboro School District; Iroquois School District; Jamestown Area School District; Jeannette City School District; Jefferson-Morgan School District; Jenkintown School District; Jersey Shore Area School District; Jim Thorpe Area School District; Johnsonburg Area School District; Juniata County School District; Juniata Valley School District; Kane Area School District; Karns City Area School District; Kennett Consolidated School District; Keystone Central School District; Keystone Oaks School District; Keystone School District; Kiski Area School District; Kutztown Area School District; Lackawanna Trail School District; Lake-Lehman School District; Lakeland School District; Lakeview School District; Lampeter-Strasburg School District; Laurel Highlands School District; Laurel School District; Lebanon School District; Leechburg Area School District; Lehighton Area School District; Lewisburg Area School District; Ligonier Valley School District; Line Mountain School District; Littlestown Area School District; Lower Dauphin School District; Lower Merion School District; Lower Moreland Township School District; Loyalsock Township

School District; Mahanoy Area School District; Manheim Central School District; Manheim Township School District; Marion Center Area School District; Marple Newtown School District; Mars Area School District; McGuffey School District; McKeesport Area School District; Mechanicsburg Area School District; Mercer Area School District; Methacton School District; Meyersdale Area School District; Mid Valley School District; Midd-West School District; Middletown Area School District; Midland Borough School District; Mifflin County School District; Mifflinburg Area School District; Millcreek Township School District; Millersburg Area School District; Millville Area School District; Milton Area School District; Minersville Area School District; Mohawk Area School District; Monessen City School District; Moniteau School District; Montgomery Area School District; Montour School District; Montoursville Area School District; Montrose Area School District; Moon Area School District; Morrisville Borough School District; Moshannon Valley School District; Mount Carmel Area School District; Mount Pleasant Area School District; Mount Union Area School District; Mountain View School District; Mt Lebanon School District; Muhlenberg School District; Muncy School District; Nazareth Area School District; Neshaminy School District; Neshannock Township School District; New Brighton Area School District; New Castle Area School District; New Hope-Solebury School District; New Kensington-Arnold School District; Newport School District; Norristown Area School District; North Allegheny School District; North Clarion County School District; North East School District; North Hills School District; North Penn School District; North Pocono School District; North Schuylkill School District; North Star School District; Northampton Area School District; Northeast Bradford School District; Northeastern York School District; Northern Bedford County School District; Northern Cambria School District; Northern Lebanon School District; Northern Lehigh School District; Northern Potter School District; Northern Tioga School District; Northern

York County School District; Northgate School District; Northwest Area School District; Northwestern Lehigh School District; Northwestern School District; Norwin School District; Octorara Area School District; Oil City Area School District; Old Forge School District; Oley Valley School District; Oswayo Valley School District; Owen J Roberts School District; Oxford Area School District; Palisades School District; Palmerton Area School District; Palmyra Area School District; Parkland School District; Pen Argyl Area School District; Penn Cambria School District; Penn Hills School District; Penn Manor School District; Penn-Delco School District; Penn-Trafford School District; Penncrest School District; Pennridge School District; Penns Manor Area School District; Penns Valley Area School District; Pennsbury School District; Pequea Valley School District; Perkiomen Valley School District; Peters Township School District; Philipsburg-Osceola Area School District; Phoenixville Area School District; Pine Grove Area School District; Pine-Richland School District; Pittsburgh School District; Pittston Area School District; Pleasant Valley School District; Plum Borough School District; Pocono Mountain School District; Port Allegany School District; Portage Area School District; Pottsgrove School District; Pottstown School District; Pottsville Area School District; Punxsutawney Area School District; Purchase Line School District; Quaker Valley School District; Quakertown Community School District; Radnor Township School District; Reading School District; Red Lion Area School District; Redbank Valley School District; Reynolds School District; Richland School District; Ridgway Area School District; Ridley School District; Ringgold School District; Riverside Beaver County School District; Riverside School District; Riverview School District; Rochester Area School District; Rockwood Area School District; Rose Tree Media School District; Saint Clair Area School District; Saint Marys Area School District; Salisbury Township School District; Salisbury-Elk Lick School District; Saucon Valley School District; Sayre Area School District;

Schuylkill Haven Area School District; Schuylkill Valley School District; Scranton School District; Selinsgrove Area School District; Seneca Valley School District; Shade-Central City School District; Shaler Area School District; Shamokin Area School District; Shanksville-Stonycreek School District; Sharon City School District; Sharpsville Area School District; Shenango Area School District; Shikellamy School District; Shippensburg Area School District; Slippery Rock Area School District; Smethport Area School District; Solanco School District; Somerset Area School District; Souderton Area School District; South Allegheny School District; South Butler County School District; South Eastern School District; South Fayette Township School District; South Middleton School District; South Park School District; South Side Area School District; South Western School District; South Williamsport Area School District; Southeast Delco School District; Southeastern Greene School District; Southern Columbia Area School District; Southern Fulton School District; Southern Huntingdon County School District; Southern Lehigh School District; Southern Tioga School District; Southern York County School District; Southmoreland School District; Spring Cove School District; Spring Grove Area School District; Spring-Ford Area School District; Springfield School District; State College Area School District; Steel Valley School District; Steelton-Highspire School District; Sto-Rox School District; Stroudsburg Area School District; Sullivan County School District; Susquehanna Community School District; Susquehanna Township School District; Susquenita School District; Tamaqua Area School District; Titusville Area School District; Towanda Area School District; Tredyffrin-Easttown School District; Tri-Valley School District; Trinity Area School District; Troy Area School District; Tulpehocken Area School District; Tunkhannock Area School District; Turkeyfoot Valley Area School District; Tuscarora School District; Tussey Mountain School District; Twin Valley School District; Tyrone Area School District; Union Area School District;

Union City Area School District; Union School District; Uniontown Area School District; Unionville-Chadds Ford School District; United School District; Upper Adams School District; Upper Darby School District; Upper Dauphin Area School District; Upper Dublin School District; Upper Merion Area School District; Upper Moreland Township School District; Upper Perkiomen School District; Upper Saint Clair School District; Valley Grove School District; Valley View School District; Wallenpaupack Area School District; Wallingford-Swarthmore School District; Warren County School District; Warrior Run School District; Warwick School District; Washington School District; Wattsburg Area School District; Wayne Highlands School District; Waynesboro Area School District; Weatherly Area School District; Wellsboro Area School District; West Allegheny School District; West Branch Area School District; West Chester Area School District; West Greene School District; West Jefferson Hills School District; West Middlesex Area School District; West Mifflin Area School District; West Perry School District; West Shore School District; West York Area School District; Western Beaver County School District; Western Wayne School District; Westmont Hilltop School District; Whitehall-Coplay School District; Wilkinsburg Borough School District; Williams Valley School District; Williamsburg Community School District; Williamsport Area School District; Wilmington Area School District; Wilson Area School District; Wilson School District; Windber Area School District; Wissahickon School District; Woodland Hills School District; Wyalusing Area School District; Wyoming Area School District; Wyoming Valley West School District; Wyomissing Area School District; York City School District; York Suburban School District; and, Yough School District. [PX-02099, “LEA Tab”].

2354. One Pennsylvania school district, Bryn Athyn School District, does not enroll any students or operate any schools. [PX-02099, “LEA Tab”].

2355. Petitioners introduced testimony about alleged deficiencies in the current educational offerings of the Petitioner Districts, SDP, and Otto-Eldred.

2356. Even though Petitioners presented some testimony about the educational offerings that SDP makes available to students, they only presented direct, first-hand evidence about a small portion of schools within that district. As of 2020-21, SDP enrolled students in 218 schools. Petitioners, however, presented direct, first-hand testimony amounting to more than a passing reference about only 13 schools in SDP. [1/13/22 N.T. at 8175 (Adaire Alexander School) (Hite); 1/11/22 N.T. at 7841 (Franklin Benjamin High School) (Hite); 1/13/22 N.T. at 8151-57 (Girls High School) (Hite); 1/11/22 N.T. at 8005 (Kensington Creative & Performing Arts High School) (Hite); 1/11/22 N.T. at 8007-08 (Francis Scott Key School) (Hite); 1/11/22 N.T. at 7945-46, 1/13/22 N.T. at 8150-53 (Masterman Julia R Sec School) (Hite); 1/11/22 N.T. at 7902-12, 7927-44 (Mitchell El School) (Hite); 1/11/22 N.T. at 7988, 1/13/22 N.T. at 8066-68 (Munoz-Marin Luis) (Hite); 1/11/22 N.T. at 7874-79, 1/13/22 N.T. at 8048-49, 8074-82 (Overbrook High School) (Hite); 1/11/22 N.T. at 7957-59 (Parkway Center City Middle College) (Hite); 1/11/22 N.T. at 7808-13, 7834 (Randolph A. Philip AVT High School) (Hite); 1/11/22 N.T. at 7801-04, 7834, 1/11/22 N.T. at 7841 (Science Leadership Academy) (Hite); 1/13/22 N.T. at 8168 (The SD of Philadelphia Virtual Academy) (Hite)].

2357. Further, Petitioners presented limited testimony about 28 additional schools, generally in brief references to the schools' current or former participation in the Acceleration Network, the schools' recognition as Blue Ribbon schools, or to reference the schools' facilities without presenting any specific testimony about the facilities. [1/13/22 N.T. at 8144-45 (Jules E Mastbaum Area Vocational/Technical School and Spring Garden School) (Hite); 1/11/22 N.T. at 7836 (Lewis C Cassidy Academics Plus School and Thomas M Peirce School)

(Hite); 1/11/22 N.T. at 8006-08 (Fidler Academics Plus, Academy at Palumbo, and Isaac Sheppard School) (Hite); 1/13/22 N.T. at 8198 (Central High School) (Hite); 1/13/22 N.T. at 8066, 68 (Cayuga School) (Hite); 1/11/22 N.T. at 7965 (Girard Academy Music Program (“GAMP”) and Penn Alexander School) (Hite); 1/13/22 N.T. at 8097 (Hill Freedman World Academy and Gen George A McCall School) (Hite); 1/13/22 N.T. at 8070-74 (Dr Ethel Allen School, Rudolph Blankenburg School, William C Bryant School, Add B Anderson School, Edward Heston School, John Marshall School, Jay Cooke Elementary School, Roberto Clemente Middle School, Delaplaine McDaniel School, Potter-Thomas School, James Rhoads School, Rhodes E Washington School, Theodore Roosevelt Elementary School, Edward Steel School, and James J Sullivan School) (Hite)].

2358. In particular, Petitioners failed to introduce direct, first-hand evidence about the educational offerings that are currently available at the following schools in the Philadelphia City School District: Allen Ethan School; Amy At Martin; Amy NW; Arthur Chester A School; Arts Academy at Benjamin Rush; Bache-Martin School; Baldi C A MS; Barry Comm John School; Barton Clara School; Bartram John - Main; Bethune Mary McLeod School; Blaine James G School; Bodine William W High School; Bregy F Amedee School; Bridesburg School; Brown Henry A School; Brown Joseph H School; Building 21; Carnell Laura H School; Carver High School; Catharine Joseph School; Childs George W School; Clemente Roberto MS; Comegys Benjamin B School; Comly Watson School; Constitution High School; Conwell Russell MS; Cook-Wissahickon School; Cramp William School; Creative and Performing Arts; Crossan Kennedy C School; Day Anna B School; DeBurgos Bilingual Magnet MS; Decatur Stephen School; Dick William School; Disston Hamilton School; Dobbins AVT High School; Dobson James School; Duckrey Tanner School; Dunbar Paul L School; Edison High School/Fareira Skills;

Elkin Lewis School; Ellwood School; Emlen Eleanor C School; Farrell Louis H School; Fell D Newlin School; Fels Samuel High School; Feltonville Intermediate School; Feltonville School of Arts & Sciences; Finletter Thomas K School; Fitzpatrick Aloysius L School; Forrest Edwin School; Fox Chase School; Frank Anne School; Frankford High School; Franklin LC; Franklin S Edmonds School; Furness Horace High School; Gideon Edward School; Girard Stephen School; Greenberg Joseph School; Greenfield Albert M School; Hackett Horatio B School; Hamilton Andrew School; Harding Warren G MS; Harrington Avery D School; Hartranft John F School; Henry Charles W School; Holme Thomas School; Hopkinson Francis School; Houston Henry E School; Howe Julia Ward School; Hunter William H School; Jackson Andrew School; Jenks Abram School; John Hancock Demonstration School; John Story Jenks Academy for the Arts and; Juniata Park Academy; Kearny Gen Philip School; Kelley William D School; Kelly John B School; Kenderton El School; Kensington High School; Kensington Health Sciences; King Martin Luther High School; Kirkbride Eliza B School; Lamberton Robert E School; Lankenau High School; Lawton Henry W School; Lea Henry C School; Lincoln High School; Lingelbach Anna L School; Locke Alain School; Loesche William H School; Logan James School; Longstreth William C School; Lowell James R School; Ludlow James R School; Marshall Thurgood; Mayfair School; McCloskey John F School; McClure Alexander K School; McKinley William School; McMichael Morton School; Meade Gen George C School; Meehan Austin MS; Meredith William M School; Middle Years Alternative; Mifflin Thomas School; Moffet John School; Moore J Hampton School; Morris Robert School; Morrison Andrew J School; Morton Thomas G School; Motivation High School; Nebinger George W School; Northeast High School; Olney El School; Overbrook Edu Ctr; Overbrook Elementary School; Parkway Northwest; Parkway West; Patterson John M School; Paul Robeson High School for Human Services; Penn Treaty School; Pennell

Joseph School; Penrose School; Philadelphia Learning Academy - North; Philadelphia Learning Academy - South; Philadelphia Military Acad at Elverson; Pollock Robert B School; Potter-Thomas School; Powel Samuel School; Prince Hall; Rhawnhurst School; Richmond School; Rowen William School; Roxborough High School; Samuel Gompers School; Samuel Pennypacker School; Saul W B Agricultural School; Sayre William L MS; School of the Future; Sharswood George School; Shawmont School; Sheridan School; Solis-Cohen Solomon School; South Philadelphia High School; Southwark School; Spruance Gilbert School; Stanton Edwin M School; Stearne Allen M School; Strawberry Mansion High School; Swenson Arts & Technology High School; Taggart John H School; Taylor Bayard School; The Linc; The Science Leadership Academy at Beeber; The U School: Innovative Lab; The Workshop School; Tilden William T MS; Vare-Washington El School; Vaux High School: A Big Picture School; Wagner Gen Louis MS; Waring Laura W School; Washington George High School; Washington Grover Jr School; Washington Martha School; Webster School; Welsh John School; West Philadelphia High School; Widener Memorial School; Willard Frances E School; Wilson Woodrow MS; Wright Richard R School; and, Ziegler William H School. [PX-02099, "LEA and School Tab"].

2359. Petitioners presented testimony from Dr. Nancy Hacker. Dr. Hacker testified about Springfield Township School District, where she was the former superintendent. She testified that Springfield Township School District is providing an adequate education to its students. [1/25/22 N.T. at 10559 (Hacker)]. Dr. Hacker did not identify any deficiencies with the educational opportunities that Springfield Township School District offers.

2360. Petitioners presented evidence about educational offerings that were available at the Jim Thorpe School District during Mr. McAndrew's tenure as a principal at that district, which ended about two years ago. Mr. McAndrew testified that, during his tenure, the

district had small class sizes, social workers, an updated curriculum, assistant principals, a Title I coordinator, a grant writer, 1-to-1 devices (iPads or computers) for all students, fantastic professional development, and a good pool of substitute teachers. [11/15/22 N.T. at 240-41 (McAndrew)]. Mr. McAndrew did not identify any deficiencies with the educational opportunities that Jim Thorpe School District offers.

2361. Petitioners presented evidence about the educational offerings that were available at the Crestwood Area School District six years ago, in 2016, when Brian Waite worked for that district. [12/9/21 N.T. at 3593 (Waite)]. Mr. Waite testified that, at Crestwood, English language teachers had a caseload of twelve students per teacher. [12/8/21 N.T. at 3396 (Waite)]. Mr. Waite testified that, in relation to Shenandoah Valley, the district offered more robust special education services to some of its low-incidence special education students. [12/8/21 N.T. at 3406-07 (Waite)]. Mr. Waite also testified that Crestwood provides better math intervention services to its students than Shenandoah Valley. [12/8/21 N.T. at 3419-20 (Waite)]. Mr. Waite did not identify any deficiencies with the educational opportunities that the Crestwood Area School District offers.

2362. Notably, Crestwood Area School District is among the school districts in the Commonwealth with the least funding per ADM. In 2019-20, Crestwood Area School District ranked 492th among Pennsylvania's school districts based on total revenue per ADM. [12/9/21 N.T. at 3813-14 (Waite); LR-01642, "2019-20 Revenue Per ADM" Tab, Line 318].

2363. There is nothing in the record to suggest that the educational offerings that are available at the Petitioner Districts, the SDP, or the Otto-Eldred are representative of the educational offerings that are available at any of the following: (a) other school districts in Pennsylvania; (b) school districts in Pennsylvania with a high percentage of economically-

disadvantaged students; or (c) school districts in Pennsylvania with low incomes or low property values.

2364. In fact, Petitioners introduced evidence intended to show that the Petitioner Districts, SDP, and Otto-Eldred are not representative of other school districts in Pennsylvania. [See, e.g., PX-04807 to 4814 (showing statewide ranks for Petitioner Districts, SDP, and Otto-Eldred on various demographic metrics)].

2365. Moreover, even between the Petitioner Districts, there are a variety of differences in the educational offerings that are available to students. Indeed, the Petitioner Districts have chosen to spend their funding in different ways and have instituted different programs, such as:

a. Lancaster has hired instructional coaches for every building in the district [12/17/21 N.T. at 5449 (Rau)];

b. Panther Valley has developed a JROTC program, taught by retired military officers, in which about a quarter of its high school students participate [11/15/22 N.T. at 542-44 (McAndrew)];

c. Shenandoah Valley created three separate high school tracks for students, including a college preparation track, an applied/business track, and a vocational/technical track [12/9/21 N.T. at 3597-99 (Waite)];

d. Greater Johnstown has developed a robust associate's degree in high school program, and it is one of the top two schools in the Commonwealth for the number of students who are enrolled in an associate's degree program while they are in high school. [12/7/21 N.T. at 2914 (Arcurio); LR-00090];

e. Wilkes-Barre has formed separate specialty academies for high school students, including the Wilkes-Barre Area STEM Academy, the Wilkes-Barre Area School District's Creative and Performing Arts Academy (CAPAA), and the Wilkes-Barre Area Business Academy [1/26/22 N.T. at 11088-94 (Costello); LR-01137; LR-01154; LR-01155; LR-01156]; and,

f. William Penn has a chapter of the National Art Honor Society and hosts an annual art show for students to display, and offer for sale, their works in ceramics, drawings, charcoal, sketches, and other art mediums. [1/6/22 N.T. at 7135-38 (Harbert)].

2366. Likewise, Petitioner Districts, which set their own pay scales for their employees, pay their teachers at different rates. For instance, Panther Valley pays its classroom teachers, on average, \$52,319.66, while Wilkes-Barre pays its classroom teachers, on average, \$73,329.99 (a 40.2% difference in average salary). [LR-05029A-00006; LR-05069A-00006].

2367. While the President of PARSS, Mr. Splain, testified about rural school generally and that PARSS members believe that they are underfunded, he did not offer any first-hand testimony about the educational offerings that are available in school districts other than Otto-Eldred.

2368. While Mr. Zeff, a member of the PA-NAACP, testified about how his organization receives complaints about educational issues, this testimony was not offered for the truth of the complaints themselves, but rather to describe how the organization investigates the complaints. Moreover, Mr. Zeff described the complaints only in general terms and did not describe the results of any investigation that the PA-NAACP conducted in response to any particular complaint. [1/19/22 N.T. at 8923-24, 8930-32 (Zeff)].

2369. Petitioners did not introduce direct, first-hand evidence about the educational offerings that are currently available at any brick and mortar charter school that operates in Pennsylvania.

2370. In particular, Petitioners failed to introduce any direct, first-hand evidence about the educational offerings that are currently available at the following Pennsylvania brick and mortar charter schools: Ad Prima Charter School; Alliance for Progress Charter School; Antonia Pantoja Community Charter School; Arts Academy Charter School; Arts Academy Elementary Charter School; Avon Grove Charter School; Baden Academy Charter School; Bear Creek Community Charter School; Belmont Charter School; Boys Latin of Philadelphia Charter School; Bucks County Montessori Charter School; Capital Area School for the Arts Charter School; Catalyst Academy Charter School; Center for Student Learning Charter School at Pennsbury; Centre Learning Community Charter School; Chester Charter Scholars Academy Charter School; Chester County Family Academy Charter School; Chester Community Charter School; Christopher Columbus Charter School; Circle of Seasons Charter School; City Charter High School; Collegium Charter School; Community Academy of Philadelphia Charter School; Crispus Attucks Charter School; Deep Roots Charter School; Discovery Charter School; Dr. Robert Ketterer Charter School Inc.; Easton Arts Academy Elementary Charter School; Environmental Charter School at Frick Park; Erie Rise Leadership Academy Charter School; Esperanza Academy Charter School; Eugenio Maria De Hostos Charter School; Evergreen Community Charter School; Executive Education Academy Charter School; Fell Charter School; First Philadelphia Preparatory Charter School; Folk Arts-Cultural Treasures Charter School; Franklin Towne Charter High School; Franklin Towne Charter Elementary School; Frederick Douglass Mastery Charter School; Freire Charter School; Gettysburg Montessori Charter School; Gillingham Charter School; Global

Leadership Academy Charter School; Global Leadership Academy Charter School Southwest at Huey; Green Woods Charter School; HOPE for Hyndman Charter School; Harambee Institute of Science and Technology Charter School; Howard Gardner Multiple Intelligence Charter School; Imhotep Institute Charter High School; Independence Charter School; Independence Charter School West; Infinity Charter School; Innovative Arts Academy Charter School; Inquiry Charter School; John B Stetson Charter School; KIPP DuBois Charter School; KIPP North Philadelphia Charter School; KIPP Philadelphia Charter School; KIPP West Philadelphia Charter School; Keystone Academy Charter School; Keystone Education Center Charter School; La Academia Partnership Charter School; Laboratory Charter School; Lehigh Valley Academy Regional Charter School; Lehigh Valley Charter High School for the Arts; Lehigh Valley Dual Language Charter School; Lincoln Charter School; Lincoln Leadership Academy Charter School; Lincoln Park Performing Arts Charter School; Lindley Academy Charter School at Birney; MAST Community Charter School; MaST Community Charter School II; MaST Community Charter School III; Manchester Academic Charter School; Mariana Bracetti Academy Charter School; Maritime Academy Charter School; Mastery CHS-Lenfest Campus; Mastery Charter School John Wister Elementary; Mastery Charter School-Cleveland Elementary; Mastery Charter School-Clymer Elementary; Mastery Charter School-Francis D. Pastorius Elementary; Mastery Charter School-Gratz Campus; Mastery Charter School-Hardy Williams; Mastery Charter School-Harrity Campus; Mastery Charter School-Mann Campus; Mastery Charter School-Pickett Campus; Mastery Charter School-Shoemaker Campus; Mastery Charter School-Smedley Campus; Mastery Charter School-Thomas Campus; Mastery Prep Elementary Charter School; Math Civics and Sciences Charter School; Memphis Street Academy Charter School @ JP Jones; Montessori Regional Charter School; Multicultural Academy Charter School; New Day Charter School; New

Foundations Charter School; Nittany Valley Charter School; Northwood Academy Charter School; Olney Charter High School; Pan American Academy Charter School; Passport Academy Charter School; Penn Hills Charter School of Entrepreneurship; People for People Charter School; Perseus House Charter School of Excellence; Philadelphia Academy Charter School; Philadelphia Electrical & Tech Charter High School; Philadelphia Hebrew Public Charter School; Philadelphia Montessori Charter School; Philadelphia Performing Arts Charter School; Premier Arts and Science Charter School; Preparatory Charter School of Mathematics Science Technology and Careers; Propel Charter School-Braddock Hills; Propel Charter School-East; Propel Charter School-Hazelwood; Propel Charter School-Homestead; Propel Charter School-McKeesport; Propel Charter School-Montour; Propel Charter School-Northside; Propel Charter School-Pitcairn; Provident Charter School; Renaissance Academy Charter School; Richard Allen Preparatory Charter School; Robert Benjamin Wiley; Community Charter School; Roberto Clemente Charter School; Russell Byers Charter School; Sankofa Freedom Academy Charter School; School Lane Charter School; Seven Generations Charter School; Souderton Charter School Collaborative; Southwest Leadership Academy Charter School; Spectrum Charter School; Stone Valley Community Charter School; Sugar Valley Rural Charter School; Sylvan Heights Science Charter School; TECH Freire Charter School; Tacony Academy Charter School; The New Academy Charter School; The Philadelphia Charter School for Arts and Science; Tidioute Community Charter School; Universal Alcorn Charter School; Universal Audenried Charter School; Universal Bluford Charter School; Universal Creighton Charter School; Universal Daroff Charter School; Universal Institute Charter School; Universal Vare Charter School; Urban Academy of Greater Pittsburgh Charter School; Urban Pathways 6-12 Charter School; Urban Pathways K-5 College Charter School; Vida Charter School; Vision Academy Charter School;

West Oak Lane Charter School; West Phila. Achievement Charter Elementary School; Westinghouse Arts Academy Charter School; Widener Partnership Charter School; Wissahickon Charter School; York Academy Regional Charter School; Young Scholars Charter School; Young Scholars of Central PA Charter School; Young Scholars of Greater; Allegheny Charter School; Young Scholars of Western Pennsylvania Charter School; and YouthBuild Philadelphia Charter School. [PX-02099, “LEA Tab”].

2371. No party introduced direct, first-hand evidence about the educational offerings that are currently available at twelve of the fourteen cyber charter schools that operate in Pennsylvania.

2372. In particular, Petitioners failed to introduce direct, first-hand evidence about the educational offerings that are currently available at the following Pennsylvania cyber charter schools: Achievement House Charter School; ASPIRA Bilingual Cyber Charter School; Agora Cyber Charter School; Central PA Digital Learning Foundation Charter School; Esperanza Cyber Charter School; Insight PA Cyber Charter School; Pennsylvania Cyber Charter School; Pennsylvania Distance Learning Charter School; Pennsylvania Leadership Charter School; Pennsylvania Virtual Charter School; Reach Cyber Charter School; and Susq-Cyber Charter School. [PX-02099, “LEA Tab”].

2373. Petitioners did not introduce direct, first-hand evidence about the educational opportunities that are currently available at Pennsylvania’s career and technical centers.

2374. In particular, Petitioners failed to introduce direct, first-hand evidence about the educational offerings that are currently available at the following career and technical centers that, among others, operate in Pennsylvania: A.W. Beattie Career Center; Admiral Peary Area

Vocational Technical School; Beaver County Career & Technology Center; Bedford County Technical Center; Berks Career and Technology Center; Bethlehem Area Vocational Technical School; Bucks County Technical High School; Butler County Area Vocational Technical School; Career Technology Center of Lackawanna County; Carbon Career & Technical Institute; Career Institute of Technology; Central Montco Technical High School; Central PA Institute of Science & Technology; Central Westmoreland Career and Technology Center; Chester County Technical College High School; Clarion County Career Center; Clearfield County Career & Technology Center; Columbia-Montour Area Vocational Technical School; Connellsville Area Career & Technical Center; Crawford County Career and Technology Center; Cumberland Perry Area Vocational Technical School; Dauphin County Technical School; Delaware County Technical High School; Eastern Center for Arts & Technology; Eastern Westmoreland Career and Technology Center; Erie County Technical School; Fayette County Career & Technical Institute; Forbes Road Career and Technology Center; Franklin County Career and Technology Center; Fulton County Area Vocational Technical School; Greater Altoona Career and Technology Center; Greater Johnstown Career and Technology Center; Greene County Career and Technology Center; Hazleton Area Career Center; Huntingdon County Career and Technology Center; Indiana County Technology Center; Jefferson County-DuBois Area Vocational Technical School; Keystone Central Career and Technology Center; Lancaster County Career and Technology Center; Lawrence County Career and Technology Center; Lebanon County Career and Technology Center; Lehigh Career & Technical Institute; Lenape Tech; Lycoming Career and Technology Center; McKeesport Area Tech Center; Mercer County Career Center; Middle Bucks Institute of Technology; Mifflin County Academy of Science and Technology; Mon Valley Career and Technology Center; Monroe Career & Tech Institute; North Montco Tech Career Center; Northern

Tier Career Center; Northern Westmoreland Career & Technology Center; Northumberland County Career and Technology Center; Parkway West Career and Technology Center; Reading Muhlenberg Career and Technology Center; SUN Area Technical Institute; Schuylkill Technology Centers; Seneca Highlands Career and Technical Center; Somerset County Technology Center; Steel Center for Career and Technical Education; Susquehanna County Career and Technology Center; Upper Bucks County Technical School; Venango Technology Center; Warren County Area Vocational Technical School; West Side Career & Technology Center; Western Area Career and Technology Center; Western Montgomery Career and Technology Center; Wilkes-Barre Area Career & Technology Center; and York County School of Technology. [PX-02099, “LEA Tab”].

2375. In a few instances, Petitioners’ witnesses testified, at a high level, about the career and technical centers that students who live in certain school districts attend, but they did not discuss the educational opportunities that these centers provide.

2376. For instance, Mr. McAndrew, superintendent of Panther Valley, testified briefly that about 70 students from his district attended the Carbon Career and Technical Institute (“CCTI”), which provides a full-time academic program. Mr. McAndrew testified that CCTI has a robust selection of programs. [11/15/22 N.T. at 549-551 (McAndrew)]. Mr. McAndrew did not identify any deficiencies with the educational opportunities that CCTI offers.

2377. Mr. Waite, superintendent of Shenandoah Valley, testified that students in the vocational/technical track at his district attend the Schuylkill Technology Center, which is a career and technical center. [12/9/21 N.T. at 3599-3600 (Waite)]. The Schuylkill Technology Center is not a comprehensive CTE center, so the students split their time between there and the district. [12/9/21 N.T. at 3617 (Waite)]. These students have opportunities to receive instruction in a variety of CTE programs, focused on different careers. [12/9/21 N.T. at 3624-26 (Waite)].

Mr. Waite, however, was unable to testify regarding the specifics of the programs, noting that he does not go to the Schuylkill Technology Center to see how it operates. [12/9/21 N.T. at 3617 (Waite)]. Mr. Waite did not identify any deficiencies with the educational opportunities that the Schuylkill Technology Center offers.

2378. Dr. Hacker testified that students at Springfield Township, where she formerly served as the superintendent, attended the Eastern School for the Arts and Technology, which is located in the eastern portion of Montgomery County. Dr. Hacker testified that Eastern School for the Arts and Technology offered a gamut of programs. [1/25/22 N.T. at 10587 (Hacker)]. She did not identify any deficiencies with the educational opportunities that the Eastern School for the Arts and Technology offers.

2379. Dr. Costello, superintendent of Wilkes-Barre Area School District, testified that his school district has an agreement with other local school districts under which students from these local school districts attend their regional career and technical center. This program is a half-day program. Dr. Costello testified that this career and technical center school has an excellent facility and offers a range of career and technical education programs to students. [1/26/22 N.T. at 10842-43 (Costello)]. However, he had little knowledge regarding the programs that the school currently offers. [1/26/22 N.T. at 10959-63 (Costello)]. Dr. Costello did not identify any deficiencies with the educational opportunities that this school offers.

2380. In only one instance did one of Petitioners' witnesses claim that a Pennsylvania career and technical center had a deficiency. In particular, Mr. Splain, superintendent of Otto-Eldred, testified that the career and technical center that his district's students use offered only nine career programs and that it took students thirty minutes to travel between his district's high school and the center. Mr. Splain testified that, in his estimation, the

career and technical center should offer more programs and that the travel time caused students to lose other opportunities. [12/21/21 N.T. at 6218-19 (Splain)]. Mr. Splain did not identify any other alleged deficiencies with the educational opportunities that the career and technical center offers. Indeed, his testimony was centered on the fact that the center provides valuable educational opportunities to students, which he would like to expand.

2381. Students at the School District of Lancaster and Greater Johnstown School District typically do not attend career and technical centers for career and technical education because those districts are “comprehensive schools” and therefore have their own career and technical education programs. [12/16/21 N.T. at 5243-45 (Rau); 12/7/21 N.T. at 2961-62 (Arcurio)].

2382. Petitioners did not introduce direct, first-hand evidence about the career and technical education programs that are available at any Pennsylvania school district other than the Petitioner Districts, SDP, and Otto-Eldred.

2383. Petitioners did not introduce direct, first-hand evidence about any IU that operates in Pennsylvania.

2384. Petitioners did not introduce direct, first-hand evidence about any public library that operates in Pennsylvania.

2385. When it comes to the students who Pennsylvania’s system of public education educates, Petitioners only introduced direct, first-hand evidence about the educational experiences of two former students. Neither student is currently attending a K-12 public school in Pennsylvania. In fact, both students graduated from Pennsylvania public schools and were accepted into college. [1/24/22 N.T. at 10037 (Horvath); Sheila Armstrong’s Response and Objection to Senator Scarnati’s First Set of Requests for Admission, Request No. 1].

2386. Petitioners failed to introduce any evidence from S.A.’s mother, Sheila Armstrong.

2387. Petitioners failed to introduce any evidence from Mr. Horvath’s mother, Tracey Hughes.

2388. There is nothing in the record to suggest that the experiences of Mr. Horvath and S.A. are representative of the experiences of any other students in Pennsylvania.

2389. Petitioners failed to introduce any evidence regarding Petitioners K.M., Jamella Miller, and Bryant Miller.

XX. CONCLUSIONS OF LAW

A. Burden of Proof

2390. “‘Legislation will not be invalidated unless it clearly, palpably, and plainly violates the Constitution, and any doubts are to be resolved in favor of a finding of constitutionality.’” *Consumer Party v. Commonwealth*, 507 A.2d 323, 331–32 (Pa. 1986) (quoting *Pennsylvania Liquor Control Bd. v. Spa Athletic Club*, 485 A.2d 732, 735 (Pa. 1984)); *see also Harrisburg Sch. Dist. v. Zogby*, 828 A.2d 1079, 1087 (Pa. 2003).

2391. Because Petitioners are asserting constitutional challenges to a statutory regime, namely, Pennsylvania’s school financing system, they have a “very heavy burden of persuasion[.]” *Pennsylvanians Against Gambling Expansion Fund, Inc. v. Commonwealth*, 877 A.2d 383, 393 (Pa. 2005) (“PAGE”)

2392. The Pennsylvania Constitution “has placed the education system in the hands of the legislature, free from any interference from the judiciary save as required by constitutional limitations.” *School District of Philadelphia v. Twer*, 447 A.2d 222, 225 (Pa. 1982). *See also Newport Tp. School Dist. v. State Tax Equalization Bd.*, 79 A.2d 641, 643 (Pa. 1951) (“appropriation and distribution of the school subsidy is a peculiar prerogative of the legislature”).

2393. “With respect to basic policy choices, the Public School Code of 1949, 24 P.S. §§ 1-101 - 27-2702, comprehensively sets forth the General Assembly’s policy decisions with respect to maintaining a thorough and efficient education system in our Commonwealth, as mandated by Article III, Section 14 of our Constitution. PA. CONST. art. III, § 14 ...” *In re Formation of Indep. Sch. Dist. Consisting of Borough of Highspire, Dauphin Cty.*, 260 A.3d 925, 938 (Pa. 2021).

2394. Courts may not inquire into the reason, wisdom, or expediency of the legislative policy. *Teachers’ Tenure Act Cases (Malone v. Hayden)*, 197 A. 344, 352 (Pa. 1938).

As our Supreme Court has explained:

We do not...re-assess the wisdom and expediency of alternative methods of solving public problems. It is the province of the legislature, not the judiciary, to determine the means necessary to combat public problems, for with means as with ends, the legislature, which is more responsive to the people and has more adequate facilities for gathering and assembling the requisite data, is in a better position to evaluate and determine alternative approaches.

Tosto v. Pennsylvania Nursing Home Loan Agency, 460 Pa. 1, 9, 331 A.2d 198, 202 (1975) (internal quotations and ellipses omitted).

2395. “[P]olicy determinations...are within the exclusive purview of the legislature, and it would be a gross violation of the separation of powers doctrine for us to intrude into that arena.” *Glenn Johnston, Inc. v. Commonwealth, Dep’t of Revenue*, 726 A.2d 384, 388 (Pa. 1999); *see also Commonwealth v. Hicks*, 466 A.2d 613, 615 n.4 (Pa. 1983) (“It is, of course, improper for a court to substitute its policy judgment for that of the Legislature.”); *Mayhugh v. Coon*, 331 A.2d 452, 456 (Pa. 1975) (“The court’s function is to interpret legislative enactments and not to promulgate them.”)

2396. Along similar lines, “[c]ourts are [] restrained, when dealing with matters of school policy, by the long-established and salutary rule that the courts should not function as super school boards.” *Zebra v. Sch. Dist. of City of Pittsburgh*, 296 A.2d 748, 750 (Pa. 1972); *Watts v. Manheim Twp. Sch. Dist.*, 121 A.3d 964, 972 (Pa. 2015).

2397. Under the Education Clause, constitutional challenges must be decided under a “reasonable relation” test, which assumes a “deferential posture toward the General Assembly’s efforts....” *William Penn II*, 170 A.3d at 441. *See also* *Marrero ex rel. Tabalas v. Commonwealth*, 739 A.2d 110 (Pa. 1999); *Teachers’ Tenure Act Cases*, 197 A. at 352; *Danson v. Casey*, 399 A.2d 360, 366 (Pa. 1979).

2398. Under that test, “as long as the legislative scheme for financing public education ‘has a reasonable relation’ to ‘providing for the maintenance and support of a thorough and efficient system of public schools,’ the General Assembly has fulfilled its constitutional duty.” *William Penn II*, 170 A.3d at 444-45 (quoting *Marrero ex rel. Tabalas v. Commonwealth*, 709 A.2d 956, 964 (Pa. Cmwlth. 1998) (internal punctuation and citations omitted)).

2399. Petitioners are not asserting “as-applied” challenges to Pennsylvania’s school financing arrangement. *See, e.g., Nigro v. City of Philadelphia*, 174 A.3d 693, 699-700 (Pa. Cmwlth. Ct. 2017) (noting that “an as-applied attack...does not contend that a law is unconstitutional as written but that its application to a particular person under particular circumstances deprived that person of a constitutional right”); *id.* at 700 (observing that “an as-applied challenge will not necessarily invalidate a law given that a law may operate in an unconstitutional way as to one particular individual or company, as to which it may be declared void, and yet may, as to others still be effective”) (internal quotations omitted).

2400. Instead, Petitioners are arguing that Pennsylvania’s school financing arrangement is facially unconstitutional and seeking relief that would alter the system as it applies across the entire Commonwealth. *See William Penn II*, 170 A.3d at 447 (observing that Petitioners are seeking a judicial assessment of “the alleged *systemic* inability of many school districts to satisfy legislative standards given their limited resources”) (emphasis in original).

B. Education Clause

2401. The Court determines that Article III, § 14 of the Pennsylvania Constitution requires the General Assembly to maintain and support a system of public education that provides students with an opportunity to obtain a standard basic public school education.

2402. The Court determines that, to the extent applicable, the following factors may bear upon whether a student is being provided with a standard basic public school education: the courses and curricula that are offered to the student; whether the students’ teachers are sufficiently trained and experienced; whether school facilities are generally safe and appropriate; and, whether the student is provided with the basic instrumentalities of learning, such as reasonably up-to-date textbooks, technology, and basic supplies.

2403. The Supreme Court has acknowledged the difficulty of formulating a test for determining what constitutes a thorough and efficient system of public education to serve the needs of the Commonwealth, commenting that “it would be folly to suggest that creating a practicable standard by which courts might define and measure the thoroughness and efficiency of a given statutory educational scheme presents no formidable challenge.” *William Penn II*, 170 A.3d at 450.

2404. The Supreme Court has noted that courts that have taken “the most sensible approach” to interpreting their state’s education clauses have done so by reference to the history of their own constitutions. *William Penn II*, 170 A.3d at 450 (citing *Hornbeck v. Somerset Cnty*

Bd. Of Ed., 458 A.2d 758, 770-81 (Md. 1983). However, “because their histories are not ours” the results of a Pennsylvania analysis may vary. *William Penn II*, 170 A.3d at 450.

2405. On May 16, 1967, through a public referendum, the voters of the Commonwealth adopted the current version of the Pennsylvania Constitution’s Education Clause.

2406. The various proposed changes to the Education Clause contained in the 1967 amendment were brought to the public’s attention through media channels.

2407. The Court interprets the Education Clause by starting with its language.

2408. The 1967 amendments to the Education Clause substantively changed the clause’s language and meaning.

2409. When the voters of Pennsylvania adopted the amendments to the Education Clause in 1967, they made the following changes:

a. Added an objective for the system of public education; that is, under the current Education Clause, the system of public education must be thorough and efficient “to serve the needs of the Commonwealth;”

b. Removed the statement in the prior, 1874 version of the Education Clause that the system of public schools was one “wherein all the children of this Commonwealth above the age of six years may be educated;”

c. Changed the system from a “system of public schools” to a “system of public education;”

d. Moved the location of the Education Clause within the Constitution from Article X to Article III, which covers Legislation; and,

e. Removed the statement in the prior, 1874 version of the Education Clause that the General Assembly “shall appropriate at least one million dollars each year” for the system of public schools.

2410. Within the United States, Pennsylvania is the only commonwealth or state with an Education Clause under which the system of public education must “serve the needs of the Commonwealth,” or “serve the needs of the state.”

2411. As the only branch in the Commonwealth government that is made up entirely of the people’s elected representatives, the General Assembly is uniquely positioned to determine the needs of the Commonwealth and how best to serve those needs.

2412. The Commonwealth has many diverse needs. The duty of determining the needs of the Commonwealth rests exclusively with the General Assembly because determining those needs is a legislative function. If this Court tried to identify or enumerate the needs of the Commonwealth, it would be forced to make subjective policy judgments that are quintessentially legislative in nature.

2413. It follows that, while it is always the case that legislation enjoys a strong presumption of constitutionality, in the context of an Education Clause-based challenge to legislation, the General Assembly is entitled to even more deference than usual.

2414. The Pennsylvania Constitution does not require the system of education to be uniform throughout the Commonwealth. *William Penn II*, 170 A.3d at 424.

2415. The Supreme Court has stated that while the legislative standards that the General Assembly adopts may be considered in determining what constitutes a thorough and efficient system of public education to serve the needs of the Commonwealth, “[s]urely it cannot be correct that we simply constitutionalize whatever standards the General Assembly relies upon

at a moment in time, and then fix those as the constitutional minimum moving forward....”
William Penn II, 170 A.3d at 450.

2416. Similarly, Pennsylvania Administrative Code’s language concerning academic standards “offers an ***aspirational account*** of what the public education system should provide each student.” *William Penn II*, 170 A.3d at 452 (emphasis added).

2417. The “aspirational account” promulgated by the State Board is not a binding norm. The State Board does not have a delegation of authority to determine the purpose of public education. See, 22 Pa. Code 4.11. Its purpose is prescribed by our Constitution: “to serve the needs of the Commonwealth.” The State Board’s promulgations of standards in 22 Pa. Code Chapter 4 are at best aspirational and non-binding, because the Public School Code does not provide the Board with standards to guide its discretion in promulgating standards.

2418. Courts in several other states have attempted to define what is meant by a “thorough and efficient” system of public education for purposes of their state constitutions. As noted by our Supreme Court: “[t]heir methods of doing so, the standards and rigor they employ, and the degree of their reference to legislative determinations vary, as do the results of the cases they have considered.” *William Penn II*, 170 A.3d at 455.

2419. In *Hornbeck*, for instance, the Maryland Court of Appeals concluded that under Maryland’s constitution, the requirement for a “thorough and efficient system” of free public schools does not “require a statewide system which provides more than basic or adequate education to the State’s children.” The court further noted that developing the statewide system required by § 1 of the Maryland Constitution is a matter for the legislature, explaining that “at most, the legislature is commanded by § 1 to establish such a system, effective in all school

districts, as will provide the State's youth with a basic public school education." *Hornbeck v. Somerset Co. Bd. Of Educ.*, 458 A.2d 758, 776-77 (Md. 1983).

2420. Other courts, in construing the constitutions of other states, have included a greater number of elements, all of which are amorphous, in their definitions of a "thorough and efficient system." For instance, in *Pauley v. Kelly*, 255 S.E.2d 859 (W.V. 1979), the West Virginia Supreme Court defined a "thorough and efficient systems of schools," as follows:

It develops, as best the state of education expertise allows, the minds, bodies and social morality of its charges to prepare them for useful and happy occupations, recreation and citizenship, and does so economically.

Legally recognized elements in this definition are development in every child to his or her capacity of (1) Literacy; (2) ability to add, subtract, multiply and divide numbers; (3) knowledge of government to the extent that the child will be equipped as a citizen to make informed choices among persons and issues that affect his own governance; (4) self-knowledge and knowledge of his or her total environment to allow the child to intelligently choose life work to know his or her options; (5) work-training and advanced academic training as the child may intelligently choose; (6) recreational pursuits; (7) interests in all creative arts, such as music, theatre, literature, and the visual arts; (8) social ethics, both behavioral and abstract, to facilitate compatibility with others in this society.

Implicit are supportive services: (1) good physical facilities, instructional materials and personnel; (2) careful state and local supervision to prevent waste and to monitor pupil, teacher and administrative competency.

255 S.E.2d at 877.

2421. In other cases, courts have adopted standards of review that are focused not on which opportunities a student receives, but rather on the outcomes that a student produces. For instance, in *Rose v. Council for Better Education, Inc.*, the Kentucky Supreme Court defined an efficient education as follows:

[A]n efficient system of education must have as its goal to provide each and every child with at least the seven following capacities: (i) sufficient oral and written communication skills to enable students to function in a complex and rapidly changing civilization; (ii) sufficient knowledge of economic, social, and political systems to enable the student to make informed choices; (iii) sufficient understanding of governmental processes to enable the student to understand the issues that affect his or her community, state, and nation; (iv) sufficient self-knowledge and knowledge of his or her mental and physical wellness; (v) sufficient grounding in the arts to enable each student to appreciate his or her cultural and historical heritage; (vi) sufficient training or preparation for advanced training in either academic or vocational fields so as to enable each child to choose and pursue life work intelligently; and (vii) sufficient levels of academic or vocational skills to enable public school students to compete favorably with their counterparts in surrounding states, in academics or in the job market.

790 S.W.2d 186, 212 (Ky. 1989).

2422. For purposes of construing and applying Pennsylvania’s Education Clause, there is no basis in the language or history of our Commonwealth’s Constitution for adopting a test that is made up of particular elements such as those identified by the West Virginia or Kentucky courts.

2423. There was no basis in West Virginia or Kentucky’s constitutions for the standards adopted by their Supreme Courts.

2424. For several reasons, the Court adopts an input-focused test.

2425. An input-based approach is in accordance with providing the requisite level of deference to the General Assembly in light of the “needs of the Commonwealth” language, as described above.

2426. Under the Education Clause, there is no textual basis for using outcome-based measures as a standard of review, and doing so would be problematic and unmanageable. Outcomes reflect much more than what occurs within schools. It is beyond dispute that parents,

guardians, communities, and, of course, students themselves play a critically important role in education, including the formal educational opportunities that the Commonwealth makes available. Neither the school that a student attends, nor the General Assembly, can guarantee that the student will achieve particular outcomes. This Court will not interpret the Constitution to require the General Assembly and the public school system to accomplish something that depends on factors outside of their control.

2427. Moreover, it is undisputed that social, economic, and personal disadvantages of students may hinder educational outcomes. The Education Clause does not obligate the General Assembly and public school system to (i) provide students with access to specialized resources (to the degree that those resources exist) in an attempt to overcome the social, economic, or personal disadvantages that adversely impact the students' educational outcomes or (ii) ensure equality of outcomes among different groups or subgroups of students. *See, e.g., Connecticut Coalition for Justice in Education Funding, Inc. v. Rell*, 176 A.3d 28, 61-62 (Conn. Sup. Ct. 2018); *McDaniel v. Thomas*, 285 S.E.2d 156, 168 (Ga. 1981) *Kukor v. Grover*, 436 N.W.2d 568, 585 (Wisc. 1989).

2428. As our Supreme Court has recognized, outcome-based measures are often subjective and frequently change. Accordingly, using these measures as a constitutional test would be unworkable and cause a multitude of problems.

2429. Using outcome-based measures as a constitutional test would require the Court to determine which of those measures to use and, under each measure, which outcomes were acceptable. If it took this approach, the Court would be setting itself up as a super-school board, which is not the appropriate role for the Judiciary.

2430. Consistent with this focus, in setting forth the purpose of public education, the Pennsylvania Administrative Code looks at inputs and opportunities, rather than outcomes. 22 Pa. Code § 4.11. For instance, subsection (c) states: “Together with parents, families and community institutions, public education provides **opportunities** for students to”: (1) acquire knowledge and skills; (2) develop integrity; (3) process information; (4) think critically; (5) work independently; (6) collaborate with others; and (7) adapt to change. 22 Pa. Code § 4.11(c) (emphasis added).

2431. Likewise, subsection (g) of the Administrative Code focuses on the subjects in which instruction to be provided, rather than outcomes to be obtained, stating: “Public schools provide instruction throughout the curriculum so that students may develop knowledge and skills in the following areas” (1) English language arts; (2) mathematics; (3) science and technology; (4) environment and ecology; (5) social studies; (6) arts and humanities; (7) career education and work; (8) health, safety and physical education; and (9) family and consumer science. 22 Pa. Code §4.11(g).

2432. Article III, § 14 focuses exclusively on a “thorough and efficient system of public education.” When voters approved the current education clause in 1967, contemporaneous dictionaries defined “Education” as: (1) “The act or process of educating or of being educated ... the act or process of providing with knowledge, skill, competence, or desirable qualities of behavior or character or of being so provided esp. by a formal course of study, instruction, or training”; (2) “A process of course learning, instruction, or training that educates or is intended to educate”; (3) “The product of an education; the totality of the knowledge; skill, competence, or qualities of character gained by education.” Philip Babcock Gove, *Webster’s Third New International Dictionary of the English Language Unabridged* (1965).

2433. Public schools frequently address, or wish to address, non-educational needs that may have an impact on a child's learning. Examples of these needs include access to social services, access to health services, internet access, and access to food and clothing. There is ample ground to believe that such needs are better addressed through other public agencies or programs or private resources, rather than by imposing such responsibilities on the public schools. Whatever one's policy views on that issue, however, the Education Clause does not require the Commonwealth's public school system to meet the non-instructional needs of its students, even those that might influence academic achievement. *See, e.g., Connecticut Coalition*, 176 A.3d at 61-62

2434. Based upon the foregoing, as explained above, the Court determines that Article III, §14 of the Pennsylvania Constitution requires the General Assembly to establish, maintain and support a system of public education that provides students with an opportunity to obtain a basic public school education.

2435. As explained above, the Court determines that, to the extent applicable, the following factors may bear upon whether a student is being provided with a standard basic public school education: the courses and curricula that are offered to the student; whether the students' teachers are sufficiently trained and experienced; whether school facilities are generally safe and appropriate; and, whether the student is provided with the basic instrumentalities of learning, such as reasonably up-to-date textbooks, technology, and basic supplies.

2436. In the only previous school funding case to proceed to trial on the merits before this Court, *Pennsylvania Ass'n of Rural and Small Schools v. Ridge*, No. 11 M.D. 1991 (Pa. Commw. Ct. July 9, 1998) (slip op.), *aff'd* 737 A.2d 246 (Pa. 1999) ("*PARSS*"), Judge Pellegrini concluded that to meet its burden of proof under the Education Clause, Petitioner

PARSS had to show that “the present system of funding education produced the result that a substantial number of districts did not have funds to provide a basic or minimal education for their students.” *PARSS* at 129. Our Supreme Court cited this opinion favorably.

2437. In determining whether Petitioners have met their burden of proof, the Court may also consider spending choices made by the school district.

2438. Applying this test, the Court concludes that Petitioners have failed to meet their burden of proving that Respondents have violated their constitutional duties under the Education Clause.

2439. As part of the conclusion that Petitioners failed to prove a violation of the Education Clause, the Court determines that Petitioners have failed to carry their burden of proving causation.

2440. In particular, Petitioners failed to prove that there is a causal relationship between the level of funding that a school system receives and educational outcomes.

2441. In addition, in determining whether Petitioners met their burden of proof, the Court considered spending choices that school districts made and whether those districts took all plausible cost-saving measures. The Petitioner Districts failed to prove that any Pennsylvania school district (including any of the Petitioner Districts) took all such measures.

C. Equal Protection Clause

2442. At trial, Petitioners presented evidence regarding alleged disparities in educational opportunities and outcomes between different school districts and demographic groups. However, as noted above, the Pennsylvania Constitution does not require the system of education to be uniform throughout the Commonwealth. *William Penn II*, 170 A.3d at 424. Likewise, the Equal Protection Clause does not protect against all outcomes or opportunities that could be characterized as “unequal.” *James v. Se. Pennsylvania Transp. Auth.*, 477 A.2d 1302,

1305 (Pa. 1984) (“it is not *per se* violative of the equal protection clause for the Commonwealth to treat different classes in different ways”).

2443. Instead, Petitioners’ claim under the Equal Protection Clause must be determined under the well-established jurisprudence for deciding such a claim. Except where invidious discrimination against a suspected class is at issue or a fundamental right has been burdened, “a legislative classification must be sustained unless it is ‘patently arbitrary’ and bears no rational relationship to a legitimate governmental interest.” *James*, 477 A.2d at 1305.

2444. Thus, an equal protection analysis typically turns on two key issues: (1) which type of government-created classification is at issue, or (2) which type of right is at issue. The answer to these questions determines which standard of review is to be applied. Where the government has created a classification that is not “suspect” and does not implicate a fundamental right “it will be sustained if it meets a ‘rational basis’ test.” *William Penn II*, 170 A.3d at 458.

2445. Petitioners indisputably do not claim to comprise a class historically recognized as suspect. *William Penn II*, 170 A.3d at 458. They do not claim, in other words, that for a “suspect” reason (such as their race, ancestry, or national origin), Pennsylvania’s statutory school financing regime treats them differently, and worse, than similarly-situated persons.

2446. Although, in Pennsylvania, there is a statutory right to receive an education, and although Article 3, § 14 imposes a constitutional duty on the General Assembly, the Pennsylvania Constitution does not confer an individual right to a particular level or quality of education.

2447. In *PARSS*, Judge Pellegrini declined to hold that, in the equal protection context, there is a fundamental right to education, such that challenges to education funding statutes are subject to strict scrutiny. *PARSS* at 125.

2448. This Court agrees. Constitutional rights that have been deemed to be fundamental flow from the Bill of Rights or otherwise protect the personal rights to be free from unwarranted Government interference. By contrast, challenges to benefits and services that the General Assembly has authorized are reviewed under a rational basis analysis. *See PARSS* at 125, n.76.

2449. Even if receiving an education were recognized as a fundamental or constitutionally sensitive right, a rational basis analysis would be appropriate in a case, such as this one, in which Petitioners are challenging the method for funding public education that the General Assembly has established, as opposed to any action that is alleged to have deprived or interfered with a particular student's right to receive a basic or minimum public education.

2450. As explained by the Minnesota Supreme Court, “[m]any other state courts, when confronted with similar challenges to state education funding statutes, have followed a similar analysis and have held that although education is a fundamental right, some lesser level of scrutiny, such as the rational basis test, should apply in evaluating the constitutionality of the financing of the education system.” *Skeen v. State*, 505 N.W.2d 299, 316 (Minn. 1993).

2451. The school funding system established by the General Assembly through its statutes and appropriations does not draw any “classifications.” Instead, it is applied neutrally to all school districts.

2452. To the extent the current school funding scheme draws classifications between the districts, it is based upon the factors set forth in the Fair Funding Formula, which are intended to direct higher amounts of state funding per ADM to lower wealth school districts.

2453. Furthermore, application of a rational basis test to Petitioners' Equal Protection claim follows from this Court's conclusion (as set forth above) that the General

Assembly fulfills its constitutional duty under the Education Clause where the legislative scheme for financing public education “has a reasonable relation” to providing for the maintenance and support of a thorough and efficient system of public schools to serve the needs of the Commonwealth.

2454. Because any individual right to receive an education that is deemed to be “fundamental” or “important” would necessarily derive from the Education Clause, it would create an inconsistent standard - and violate traditional principles of common sense - to hold that the same public education financing system that satisfies the standard under the Education Clause could simultaneously violate the Equal Protection Clause based upon the application of a higher level of scrutiny.

2455. Accordingly, the Court finds that Petitioners’ constitutional challenge to the public education financing system must be decided under a similar standard, whether the challenge is asserted under the Education Clause or the Equal Protection Clause. The result is that in order to prove that the financing system is without a rational basis, Petitioners must prove that “the present system of funding education produced the result that a substantial number of districts did not have funds to provide a basic or minimal education for their students.” *PARSS* at 129.

2456. As stated above, Petitioners have failed to meet that burden.

2457. The Court further concludes that there is a rational basis for relying upon both state and local tax dollars to fund Pennsylvania’s public schools – a practice that is followed in every other state in the U.S. and has been in place in the Commonwealth for over 200 years – while generally providing higher levels of state funding to lower wealth school districts that have less ability to raise money through local taxes.

2458. Specifically, the reliance upon local taxes is consistent with the longstanding tradition of local control over public schools. Local control has many public benefits, including increased citizen participation and local oversight, spending efficiency, tax base stability, competition among districts within the school system, and allowing communities to spend locally-raised tax dollars for the benefit of local schools and students.

2459. The fact that there are other potential funding schemes, including ones that Petitioners prefer, which might also preserve local control is not relevant to the Court's analysis. The question is not whether the Court believes that the system adopted by the General Assembly is the ideal one, but whether there is a rational basis for it.

2460. Even if this Court were to determine that an intermediate level of scrutiny applies to the equal protection claim, the Court finds that the government's interest in establishing a system to fund Pennsylvania's system of public schools is an "important" one; that the any classifications drawn by funding legislation are closely related to the objectives of the funding system; and that the funding system does not prevent any person who is excluded from an important educational right or benefit from challenging her exclusion on the grounds that, in her particular case, denial of the right or benefit would not promote the purpose of the classification. *Yanakos v. UPMC*, 218 A.3d 1214, 1222 (Pa. 2019).

2461. Likewise, even if the Court were to conclude that an intermediate or strict scrutiny test applies to the equal protection claim, the claim would still fail because Petitioners have failed to demonstrate that Legislative Respondents have treated them differently from similarly-situated people in a way that denied or interfered with their right to an education.

2462. Petitioners, moreover, have failed to appropriately define the class of students that they believe has been deprived of equal protection under the law.

2463. Petitioners presented no evidence regarding the education that K. M. received and, therefore, the Millers must be dismissed as Petitioners.

2464. The evidence presented at trial does not show that Respondents interfered with any right of Michael Horvath or S. A. to a basic public education.

2465. The Organizational Petitioners and School District Petitioners do not possess individual rights and lack standing to pursue an equal protection claim.

D. Summary of Legal Findings

2466. Petitioners have failed to establish that Respondents violated the Education Clause.

2467. Petitioners have failed to establish that a lack of funding is what caused any alleged deficiencies in Pennsylvania's public school system.

2468. Petitioners have failed to establish that Respondents violated the Equal Protection Clause.

E. Parties and Requested Remedy

2469. Petitioners have not named 494 of the Commonwealth's school districts, or any charter school, career and technical center, or intermediate unit, as parties despite the fact that those LEAs would be materially impacted by the relief that Petitioners are seeking. These other LEAs are indispensable parties to the present litigation and the matter should be dismissed for failure to join indispensable parties. In the alternative, the Court cannot grant any relief that would adversely impact upon the funding or legal rights of the LEAs that Petitioners did not name as parties.

2470. The only Legislative Respondents are Senator Corman, in his official capacity as President *pro tempore* of the Pennsylvania Senate, and Speaker Cutler, in his official capacity as Speaker of the Pennsylvania House of Representatives. No other legislator or

legislative body is named as a party to this case or participated in the trial. Legislative Respondents have powers and duties specified by the Pennsylvania Constitution, statutes, and rules of their respective chambers. However, none of their powers and duties are implicated in this case. They cannot direct the votes of members of their chambers. Under Pennsylvania's Constitution, Senator Corman and Speaker Cutler cannot, by themselves, change or enact any law. A judgment of this Court against the Legislative Respondents cannot be binding on their respective chambers or the General Assembly. Accordingly, Petitioners cannot obtain relief from the General Assembly, the Pennsylvania Senate, the Pennsylvania House of Representatives, any legislative committee, or any other Senator or Representative, whether in their official or individual capacity. Moreover, Petitioners have not proven any case of liability against Legislative Respondents.

2471. Under separation of powers principles, the Court cannot mandate the enactment of legislation. *See, e.g., Jones v. Packel*, 342 A.2d 434, 438 (Pa. Cmwlth. 1975) (in rejecting request for it to order certain members of General Assembly “to pass appropriate legislation to provide compensation for plaintiff’s claim [of false imprisonment] and to establish a board to hear moral claims against the Commonwealth,” Court said there would be a “complete negation” of separation of powers principles if it mandated the enactment of legislation); *see also Pennsylvania State Ass’n of County Commissioners v. Commonwealth*, 681 A.2d 699, 702 (Pa. 1996) (litigants may not sue in court to compel legislature to enact law); *Erie Firefighters Local No. 293 of Int’l Ass’n of Firefighters v. Gardner*, 178 A.2d 691, 695-96 (Pa. 1962) (courts cannot compel defendants to enact legislation, as legislative function is purely discretionary and such action would be unwarranted usurpation of power reposed in legislative branch of government).

2472. Similarly, “the budgeting process is beyond the power of courts to direct.” *Mental Health Ass’n in Pennsylvania v. Corbett*, 54 A.3d 100, 105 (Pa. Commw. 2012) (citing

Phila. Dep't of Human Servs. v. Dep't of Pub. Welfare, 941 A.2d 766, 775 (Pa.Cmwlth.2008).

Under the Pennsylvania Constitution, the Governor is directed each year to “submit” a budget to the General Assembly, PA. CONST. art. VIII, § 12; appropriations are to be “made by the General Assembly,” PA. CONST. art. VIII, § 13; and “[n]o money shall be paid out of the treasury, except on appropriations made by law,” PA. CONST. art. III, § 24. *See also Jubelirer v. Rendell*, 953 A.2d 514, 529 (Pa. 2008).

2473. The School Code no longer requires the calculation of adequacy targets or adequacy shortfalls in connection with the distribution of Basic Education Funding. Section 2502.48, 24 Pa.C.S. §25-2502.48, applied only to three school years (2007-2008, 2008-2009, and 2009-2010) and is not still operative. The provision of the School Code that currently governs the distribution of Basic Education Funding is Section 2502.53, 24 Pa.C.S. §25-2502.48, which contains no reference to adequacy targets.

2474. Furthermore, even if Section 2502.48 were still valid and in effect, it would not define a constitutional minimum with respect to the funding of Pennsylvania’s school districts. *William Penn II*, 170 A.3d at 450 (“[s]urely it cannot be correct that we simply constitutionalize whatever standards the General Assembly relies upon at a moment in time, and then fix those as the constitutional minimum moving forward....”).

2475. Respondents enjoy the protections of sovereign immunity.

2476. Responsibility for establishing a constitutionally compliant school funding system lies solely with the General Assembly, as understood by the electorates who adopted the 1967 Education Clause as well as the 1874 Education Clause.

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