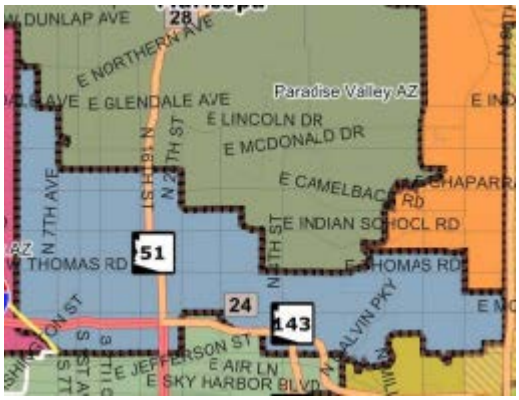
A.2 Target Population

Fifth Arrow proposes to serve at-risk students and families in Phoenix's 85012, 85014, 85016 and 85019 communities roughly defined as Central/East Phoenix. The target population is located south of Peoria, east of the Arizona State Route 51, west of Interstate 17, and north of Interstate 10. The majority of the target area is Arizona's Legislative District 24. Figure A.2.1 is a map of the area for proposed service.

FIGURE A.2.1: MAP OF ARIZONA LEGISLATIVE DISTRICT 24



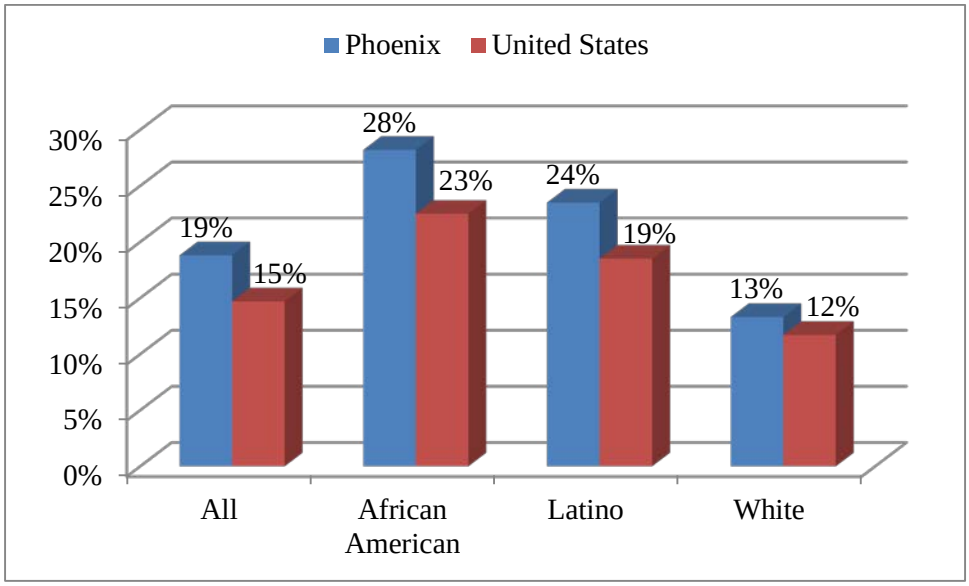
Central/Eastern Phoenix is an area plagued by poor educational outcomes and few choices for attending high schools that support at-risk youth. For example, of the high schools that serve the student population similar to Fifth Arrow in the area, only three received an A-F Accountability Grade higher than a C during the 2013-2014 school year (see Figure A.2.2).[1] This is troubling due to the alarming number of dropouts and disconnected youth in the Phoenix metro area, approximately 3,070 and 45,040 respectively.[2] In a recent report, Burd-Sharps and Lewis analyzed data on disconnected youth nationwide and found that of the 25 most populous cities in the United States, Phoenix had the highest rate of youth disconnection with 18.8 percent.[3] It is important to note that when the data was disaggregated by subgroups, African Americans (28.2%) and Latinos (23.5%) were shown to disproportionately struggle with youth disconnection compared to their White peers (13.3%) in Phoenix (see figure A.2.3).[4] This data suggests a great need for high-quality schools that serve the unique needs of the underserved youth population in this area. Most importantly, it highlights the need for high-quality education programs that differ from the traditional school system and that have an outstanding track-record meeting the needs of students of color, such as Fifth Arrow's educational program.

[1] Arizona Charter School Association. (2015). Educator evaluator. Retrieved from https://azcharters.org/maps
[2] WestEd. (2014). How Arizona's Dropout Crisis Affects Communities, Creates Economic Losses for the State of Arizona. Retrieved from http://www.wested.org/resources/how-arizonas-dropout-crisis-affects-communities-creates-economic-losses-for-the-state-of-arizona-57172/
[3] Burd-Sharps, S., & Lewis, K. (2012, September 1). One in Seven: Ranking Youth Disconnection in the 25 Largest Metro Areas. Retrieved from http://www.measureofamerica.org/one-in-seven/
[4] Burd-Sharps, S., & Lewis, K. (2012, September 1). One in Seven: Ranking Youth Disconnection in the 25 Largest Metro Areas. Retrieved from http://www.measureofamerica.org/one-in-seven/

FIGURE A.2.2: AZ LEARNS RESULTS OF HIGH SCHOOLS SIMILAR TO FIFTH ARROW IN THE TARGET AREA

School Name	AZ Learns A-F Rating
Arizona Call-a-Teen Center for Excellence	C-ALT
Genesis Academy	B-ALT
Learning Institute, The	C-ALT
Ombudsman - Charter East	B-ALT
Ombudsman - Charter East II	C-ALT
StarShine Academy	D-ALT
Summit High School	D-ALT

FIGURE A.2.3: DISCONNECTED YOUTH RATES IN PHOENIX COMPARED TO UNITED STATES



A. Description of the Population

This section will provide further context and analysis for the target population that Fifth Arrow proposes to serve.

I. ANALYSIS OF THE COMMUNITY

The Central/Eastern Phoenix area has several risk factors that challenge the community. The area is plagued by high rates of crime and poverty, and rapidly changing demographics. Also, with the high number of dropouts and disconnected youth in the Phoenix area, the negative impact of these risk factors are compounded since at-risk youth are isolated from society and opportunities for success are limited. On an economic and social standpoint, this translates into billions of dollars lost annually in the Phoenix community and has profound effects since it fuels the cyclical nature of poverty for these communities. Figure A.2.4 highlights the social and economic loss per high school dropout and disconnected youth in the area, where social loss reflects lost earnings, higher criminal activity, poorer health status, and higher reliance on government

programs and fiscal loss reflects lost taxes and increased government spending on crime, health, and welfare.[5]

FIGURE A.2.4: LOSS COMPARISON FOR ARIZONA AND PHOENIX

Per High School Dropout	Arizona	Phoenix
Social Loss	$ 421,300	$ 463,500
State/Fiscal Loss	$ 54,400	$ 63,000
Federal Fiscal Loss	$ 81,400	$ 90,500
Total Fiscal Loss	$ 135,800	$ 153,500

Per Disconnected Youth	Arizona	Phoenix
Social loss: annual during youth	$ 34,400	$ 40,200
Social loss over youth years	$ 155,500	$ 181,500
Social loss: lifetime total	$ 695,100	$ 765,900
Fiscal loss: annual during youth	$ 12,400	$ 14,800
Fiscal loss over youth years	$ 55,800	$ 66,900
Fiscal loss: lifetime total	$ 234,500	$ 294,700

II. GENERAL DEMOGRAPHICS

According to The City of Phoenix Planning and Development Research Team, in 2010 almost thirty percent of the Phoenix population was school-aged children (under 18 years of age).[6] Today, there are 27,031 students in the Phoenix Union High School District (PUHSD). The ethnic breakdown of children under 18 served by PUHSD is as follows: 78.9% Hispanic, 9.4% African-American, 5.6% Anglo, 2.8% Native American and 2.4% Asian. As stated before, the youth disconnection rate in Phoenix is disproportionately higher for Latinos and African Americans, which are the two largest subgroups of PUHSD. This is reflective in research that has found that only 55% of youth ages 16 to 24 in the area were enrolled in school, the lowest amount of any metro area nationwide.[7]

In 2014, 46% of children in Legislative District 24 were living in poverty, significantly higher than the state average of 24%.[8] Additionally, the Legislative District's averages were substantially higher compared to the state average for the percentage of children in married-couple families living in poverty and the percentage of children in households that are receiving a public benefit (see Figure A.2.5).[9]

[5] WestEd. (2014). How Arizona's Dropout Crisis Affects Communities, Creates Economic Losses for the State of Arizona. Retrieved from http://www.wested.org/resources/how-arizonas-dropout-crisis-affects-communities-creates-economic-losses-for-the-state-of-arizona-57172/

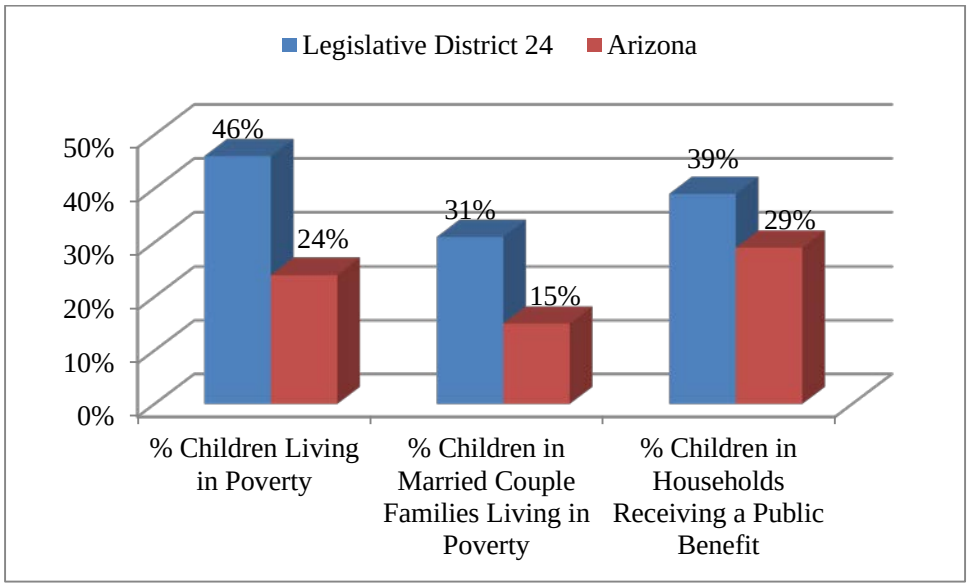
[6] City of Phoenix Planning and Research Development Team. (2012, February 16). Custom Report selected from "Block Group" Scale Geography in GIS. Retrieved from https://www.phoenix.gov/pddsite/Documents/pdd_pz_pdf_00179.pdf

[7] Burd-Sharps, S., & Lewis, K. (2012, September 1). One in Seven: Ranking Youth Disconnection in the 25 Largest Metro Areas. Retrieved from http://www.measureofamerica.org/one-in-seven/

[8] Children's Action Alliance. (2014). Legislative District 24. Retrieved from http://azchildren.org/wp-content/uploads/2014/07/LD-24-AIMS-2014.pdf

[9] Children's Action Alliance. (2014). Legislative District 24. Retrieved from http://azchildren.org/wp-content/uploads/2014/07/LD-24-AIMS-2014.pdf.

FIGURE A.2.5: POVERTY RATES IN LEGISLATIVE DISTRICT 24 COMPARED TO ARIZONA



Using the percentage of students qualifying for free and reduced lunch (FRL) as an indicator of poverty, the data from PUHSD reflects a high rate of poverty in comparison to the Arizona average percentage.[10] In fact, all schools in the PUHSD have FRL percentages over the state average of 55%, and all but two high schools have percentages that reflect a high concentration of students in poverty, over seventy percent FRL (see Figure A.2.6).[11] The high percentage of disconnected students of color and poverty echoes research that has found that "low-income communities of color suffer from a lack of public investment that leads to poor-quality schools, limited transportation options, and few amenities."[12]

FIGURE A.2.6: PERCENT OF STUDENTS QUALIFYING FOR FREE OR REDUCED PRICED LUNCH

Alhambra High School	84%
Betty Fairfax High School	64%
Bostrom Alternative Center	90%
Camelback High School	83%
Carl Hayden High School	88%
Central High School	89%
Cesar Chavez High School	71%
Franklin Police and Fire High School	82%
Maryvale High School	83%
Metro Tech High School	88%
North High School	81%
Phoenix Union Bioscience High School	60%
South Mountain High School	84%
Suns-Diamondbacks Education Academy	81%
Trevor Browne High School	82%

[10] Arizona Department of Education. (2014). Percentage of children approved for free or reduced price lunches. Retrieved from http://www.azed.gov/health-nutrition/frpercentages/

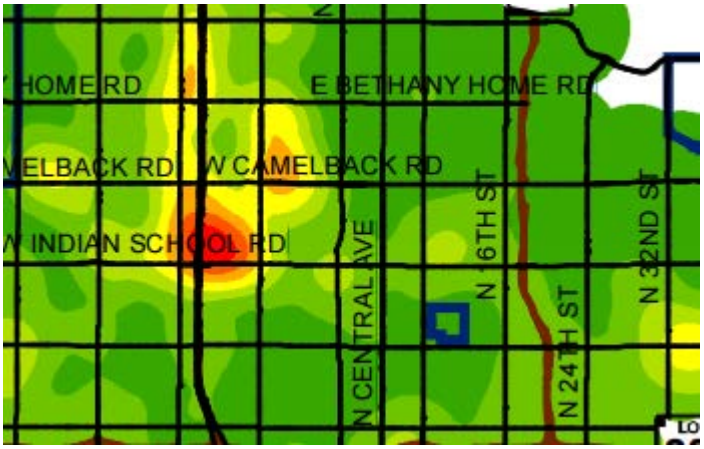
[11] Arizona Department of Education. (2014). Percentage of children approved for free or reduced price lunches. Retrieved from http://www.azed.gov/health-nutrition/frpercentages/

[12] Burd-Sharps, S., & Lewis, K. (2012, September 1). One in Seven: Ranking Youth Disconnection in the 25 Largest Metro Areas. Retrieved from http://www.measureofamerica.org/one-in-seven/

III. CRIME, TEEN PREGNANCY, AND DRUG ABUSE

The high rate of crime is equally concerning in this community (see Figure A.2.7).[13] Much research has shown a strong correlation between low educational attainment and a high rate of crime.[14] [15] Previously mentioned, the economic and social impacts are far-reaching to youth and the community. Nevertheless, as emphasized in research by Levin, Belfield, Muennig, & Rouse, the impact from expected high school graduates on reducing the crime rate is drastic. Likewise, they calculated that the average lifetime cost-savings to the criminal justice system per new high school graduate is $26,600.[16] The authors conclude their study by recommending interventions, such as small size and strong counseling, that help spur high school graduation rates – which are interventions utilized by Fifth Arrow.

FIGURE A.2.7: CRIME HOT SPOT MAP OF THE TARGET COMMUNITIES: YELLOW, ORANGE, AND RED INDICATE HIGH-CRIME AREAS



Nationally, only forty percent of teenage mothers finish high school. The Teen Pregnancy and High School Dropout Study conducted by America's Promise Alliance found that PUHSD has the highest number of teen births in comparison to all other school districts in Arizona, with 3,810 teen births in 2012.[17] Additionally, the study states that of the 25 persistently low-achieving school districts in the nation, PUHSD had one of the lowest graduation rates nationwide (see Figure A.2.8).[18] Likewise, Legislative District 24 has a substantially higher percentage of women who gave birth who did not have a high school diploma (34%), compared to the state average

[13] City of Phoenix Police Department. (2014). City of Phoenix Police Department Uniform Crime Reporting (UCR) Violent Crimes Calendar Year (2014). Retrieved from https://www.phoenix.gov/policesite/Documents/2014%20UCR%20Part%20I%20Crime%20Hotspot%20Maps.pdf

[14] Lochner, L., & Moretti, E. (2001). *The effect of education on crime: Evidence from prison inmates, arrests, and self-reports* (No. w8605). National Bureau of Economic Research.

[15] Levin, H., Belfield, C., Muennig, P., & Rouse, C. (2007). *The costs and benefits of an excellent education for all of America's children* (Vol. 9). New York: Teachers College, Columbia University.

[16] Levin, H., Belfield, C., Muennig, P., & Rouse, C. (2007). *The costs and benefits of an excellent education for all of America's children* (Vol. 9). New York: Teachers College, Columbia University.

[17] Shuger, L. (2012). Teen Pregnancy and High School Dropout: What Communities Can Do to Address These Issues. Washington, DC: The National Campaign to Prevent Teen and Unplanned Pregnancy and America's Promise Alliance.

[18] Shuger, L. (2012). Teen Pregnancy and High School Dropout: What Communities Can Do to Address These Issues. Washington, DC: The National Campaign to Prevent Teen and Unplanned Pregnancy and America's Promise Alliance.

(21%).[19] Research has shown that adolescents that live in disadvantaged communities, such as those in the Phoenix metro area, are more likely to have or father a baby.[20]

FIGURE A.2.8: BOTTOM RANKED SCHOOL DISTRICTS WITH THE LOWEST GRADUATION RATES OF THE TWENTY-FIVE PERSISTENTLY LOW-ACHIEVING SCHOOL DISTRICTS IN THE U.S.

School District	District Graduation Rate	Projected Number of Non-Graduates	Total No. of Teen Births in the City/County
Phoenix Union High School District	45.2%	4,209	3,810
Clark County School District	43.1%	16,114	3,134
Detroit City School District	33.4%	8,039	2,418

The implications of these statistics are staggering. Less than half of teen mothers graduate from high school and children born to unwed teen moms are more likely to grow up in poverty.[21] [22] What is more, research by Shuger showed that thirty percent of teen girls cited pregnancy or parenthood as the main reason for dropping out of school. This rate was higher for African American (38%) and Latina (36%) girls – subgroups that are the majority in PUHSD.[23] Yet, research has shown that "adolescents who are enrolled in school and engaged in learning tend to be less likely than other adolescents to have or father a baby."[24] While traditional school schedules can be difficult for teen parents, Fifth Arrow's educational program consists of flexible and extended hours, as well as support from a caring staff to help minimize the barriers teen parents experience on their path to graduation.

To continue, drug abuse in the Phoenix Metro Community is reported to be higher than that of other Arizona communities. Teen drug use, including marijuana, cocaine, heroin, and methamphetamine, is not uncommon among students of Phoenix communities.[25] This type of high-risk behavior is often associated with truancy and attrition. Moreover, according to a 2013

[19] Children's Action Alliance. (2014). Legislative District 24. Retrieved from http://azchildren.org/wp-content/uploads/2014/07/LD-24-AIMS-2014.pdf
[20] Wildsmith, E., Barry, M., Manlove, J., & Vaughn, B. (2013, January 1). Adolescent Health Highlight: Teen Pregnancy and Childbearing. Retrieved from http://www.childtrends.org/wp-content/uploads/2013/11/Pregnancy-and-Childbearing-updated-12-131.pdf
[21] Shuger, L. (2012). Teen Pregnancy and High School Dropout: What Communities Can Do to Address These Issues. Washington, DC: The National Campaign to Prevent Teen and Unplanned Pregnancy and America's Promise Alliance.
[22] Wildsmith, E., Barry, M., Manlove, J., & Vaughn, B. (2013, January 1). Adolescent Health Highlight: Teen Pregnancy and Childbearing. Retrieved from http://www.childtrends.org/wp-content/uploads/2013/11/Pregnancy-and-Childbearing-updated-12-131.pdf
[23] Shuger, L. (2012). Teen Pregnancy and High School Dropout: What Communities Can Do to Address These Issues. Washington, DC: The National Campaign to Prevent Teen and Unplanned Pregnancy and America's Promise Alliance.
[24] Wildsmith, E., Barry, M., Manlove, J., & Vaughn, B. (2013, January 1). Adolescent Health Highlight: Teen Pregnancy and Childbearing. Retrieved from http://www.childtrends.org/wp-content/uploads/2013/11/Pregnancy-and-Childbearing-updated-12-131.pdf
[25] Arizona Criminal Justice Commission. (2014). Arizona Youth Survey: Maricopa County. Retrieved from http://www.azcjc.gov/acjc.web/sac/AYSReports/2014/2014 Arizona Youth Survey Profile Report.pdf

youth survey by the Centers for Disease Control and Prevention, almost one in three Arizona high school students stated being offered, sold, or given an illegal drug on school property.[26]

IV. DEGREE ATTAINMENT, ENGLISH LANGUAGE LEARNERS, AND SPECIAL EDUCATION POPULATION

The percentage of adults 25 years and older that have a high school diploma or GED is lower than the state average – with Legislative District 24 ranking 22nd out of 30 districts.[27] This is reflective in the median income of the area, $37,024, which is well below the state median of $49,774. Studies have shown the correlation between low educational attainment and low income, and how instances of high adult disconnection rates contribute to high rates of youth disconnection.[28]

To continue, of the 27,031 students enrolled in PUHSD, the English Language Learner population is almost five percent. Also, there are 66 different primary home languages spoken at home, with 47.4% of the student population having Spanish as their primary home language.[29] What is more, 11.7% of the students attending PUHSD schools have special needs.[30] Furthermore, while the average dropout rate for PUHSD was 3.6%, a study released by the Arizona Department of Education found that dropout rates for PUHSD students with special needs and English Language Learners was higher, at 4.4% and 6.2% respectively.[31]

These indicators suggest that communities served by PUHSD would benefit from a high school program like Fifth Arrow that is dedicated to helping students in a highly personalized format achieve a high school diploma and college/career success. Fifth Arrow will be managed by Pathways Management Group (PMG) and the success rate for the English Language Learners served by their schools is exemplary. For example, Figure A.2.9 includes 2014 California High School Exit Examination (CAHSEE) combined administration results for all 10th-grade students at selected Options For Youth (OFY) schools, which are managed by PMG.[32] California students must pass the CAHSEE to receive a high school diploma. Please note that combined administration indicates results for all exam administrations in the selected school year, and repeat test takers may take the CAHSEE multiple times in a school year. Also, for privacy reasons, data is not included in cohorts that are fewer than ten students.

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[26] Centers for Disease Control and Prevention (CDC). *1991-2013 High School Youth Risk Behavior Survey Data*. Retrieved from http://nccd.cdc.gov/youthonline/.

[27] Department of Economic Security. (2014). Legislative District Demographics and DES Client/Provider Summary Handbook 2014. Retrieved from https://www.azdes.gov/InternetFiles/Pamphlets/pdf/Arizona_Legislative_District_Demographics_Handbook_2014.pdf

[28] Burd-Sharps, S., & Lewis, K. (2012, September 1). One in Seven: Ranking Youth Disconnection in the 25 Largest Metro Areas. Retrieved from http://www.measureofamerica.org/one-in-seven/

[29] Phoenix Union High School District. (2015). Phoenix Union High School District Profile. Retrieved from http://www.phoenixunion.org/Page/106

[30] Ibid.

[31] Arizona Department of Education. (2015) Research and Evaluation: Dropout rate study report, 2014. Retrieved from http://www.azed.gov/research-evaluation/dropout-rate-study-report/

[32] California Department of Education. (2015). California High School Exit Examination (CAHSEE). Retrieved from http://cahsee.cde.ca.gov/

FIGURE A.2.9: CAHSEE RESULTS FOR ENGLISH LANGUAGE LEARNERS AT PMG MANAGED SCHOOLS

School	Tested or Passing	Subject	All Students	English Learner (EL) Students	Reclassified Fluent-English Proficient (RFEP) Students
OFY - Burbank	# Tested	Math	182	13	52
	Passing	Math	167 (92%)	9 (69%)	50 (96%)
	# Tested	ELA	178	14	53
	Passing	ELA	160 (90%)	6 (43%)	51 (96%)
OFY - San Bernardino	# Tested	Math	81	5	12
	Passing	Math	78 (96%)	-	12 (100%)
	# Tested	ELA	79	5	11
	Passing	ELA	67 (85%)	-	10 (91%)
OFY - San Gabriel	# Tested	Math	151	13	10
	Passing	Math	133 (88%)	9 (69%)	-
	# Tested	ELA	150	12	9
	Passing	ELA	140 (93%)	8 (67%)	-
OFY - San Juan	# Tested	Math	187	9	17
	Passing	Math	141 (75%)	-	13 (76%)
	# Tested	ELA	184	10	16
	Passing	ELA	150 (82%)	-	15 (94%)
OFY - Victor Valley	# Tested	Math	484	46	43
	Passing	Math	414 (86%)	34 (74%)	42 (98%)
	# Tested	ELA	463	46	42
	Passing	ELA	393 (85%)	26 (57%)	38 (90%)

V. ANALYSIS OF SURROUNDING SCHOOLS

Fifth Arrow plans to target students living within the following zip codes: 85012, 85014, 85016, and 85019. As mentioned earlier, of the high schools that serve a similar student population to Fifth Arrow in the area, only three received an A-F Accountability Grade higher than a C during the 2013-2014 school year (see Figure A.2.2).[33] Furthermore, the average high school graduation rate of the traditional high schools in the area is only 73.5%, which doesn't include the dropout rate or the rate of students currently not in school (see Figure A.2.10). This suggests that over 25% of high school students are underserved and not attaining their high school diploma. Fifth Arrow intends to bridge this gap by offering the environment and evidence-based support students need to thrive in their community.

FIGURE A.2.10: GRADUATION RESULTS OF NEIGHBORING TRADITIONAL PUBLIC SCHOOLS

School	Graduation Rate (%)
Alhambra HS	71%
Camelback HS	77%
Central HS	70%
North HS	76%
Average	73.5%

[33] Arizona Charter School Association. (2015). Educator evaluator. Retrieved from https://azcharters.org/maps

According to the Arizona Department of Education, test results for 2014 indicate that an average of about four in ten students in the high schools within our target community scored proficient in math, and the Math Median Student Growth Percentile (SGP) averaged about 39%. To continue, seventy percent of students attending schools in the target area scored proficient in reading, and the Reading Median SGP averaged 41.5% (see Figure A.2.11).[34] As mentioned before, the percentage of students that are disconnected and not enrolled in school in the Phoenix metro area is staggering, approximately 45,040 and 55% not enrolled respectively. Therefore, it is critical to review test results for alternative schools in the target area since they are meeting a high demand in the area. Figure A.2.12 displays the most recent test data for selected target area alternative schools. These results indicate that less than one in five students tested proficient in mathematics and almost half of students tested proficient in reading. It is clear that schools within the communities we have identified are not adequately preparing students to graduate from high school and fully participate in post-secondary education. This is crucial since, due to the rapidly changing demographics of the U.S., a majority of the workforce will be filled by African American and Latinos, the major sub-groups in the target community.[35] This signals the need for educational programs that are reaching the underserved student population of PUHSD in an innovative way so to ensure that they are prepared for post-secondary success.

FIGURE A.2.11: ARIZONA REPORT CARD OVERVIEW OF SELECTED TRADITIONAL AREA SCHOOLS

School	Math Proficiency	Math Median SGP	Reading Proficiency	Reading Median SGP	Grade
Alhambra HS	32%	39	68%	46	C
Camelback HS	44%	46	69%	40	C
Central HS	39%	40	71%	42	C
North High School	42%	29.5	73%	38	C
Average	39%	38.625	70%	41.5	C

FIGURE A.2.12: ARIZONA REPORT CARD OVERVIEW OF SELECTED ALTERNATIVE AREA SCHOOLS

School	Math Proficiency	Reading Proficiency	Grade
Arizona Call-a-Teen Center for Excellence	25%	54%	C-ALT
Genesis Academy	26%	62%	B-ALT
Learning Institute, The	12%	47%	C-ALT
Ombudsman - Charter East	10%	56%	B-ALT
Ombudsman - Charter East II	18%	35%	C-ALT
StarShine Academy	13%	47%	D-ALT
Summit High School	9%	42%	D-ALT
Average	16%	49%	-

[34] Arizona Department of Education. (2015). Arizona Report Cards. Retrieved from https://www.azreportcards.org/
[35] Bradley, J. (2015). *The Changing Face of the Heartland: Preparing America's Diverse Workforce for Tomorrow*. Brookings Institution Press. Retrieved from http://www.brookings.edu/research/essays/2015/changingfaceoftheheartland

B. Meeting the Needs of the Target Population

After reviewing the context and analysis of the target population, there is much evidence that supports the need for a comprehensive educational program that provides a more flexible learning environment than a traditional school setting in the target communities. Although PUHSD's Suns-Diamondbacks Education Academy, an alternative school that serves at-risk students, will relocate to the area to accommodate 400 students, the analysis of this area shows a great need that surpasses this amount. This area is plagued by high rates of poverty, crime, teen pregnancy, and drug abuse which have contributed to the highest rate of youth disconnection in any major metro area nationwide – nearly one in five youth ages 16 to 24 are disconnected in the Phoenix metro area.[36] Fifth Arrow, a Pathways In Education (PIE) school, is dedicated to serving at-risk populations through intensive individualized instruction and mentoring, and by incorporating evidence-based strategies for learning which help re-engage students to develop optimism, grit, gratitude, and resilience – factors that are critical for disconnected students. The positive impact of PIE educational programs on student success is aptly described by alumnus Edgar Garcia, Ph.D.:

> "Programs like Pathways In Education change lives because they are different. Everything that people say about mainstream public school stifling curiosity, creativity, and talent was the story of my life. I spent years mired in disciplinary problems, until I was finally expelled from high school, simply because the mainstream model of education just did not work for me. And it wasn't until a meaningful educational alternative was offered to me—an alternative *pathway* that let me explore and develop interests and dreams I didn't even know I had—that I was able to graduate from high school, continue through community college to UC Berkeley, move on to completing a Ph.D. at Yale, and finally arrive to my current position as a professor of English at the University of Chicago."

Overall, Fifth Arrow's educational model will support the target population's individual needs for academic success, as well as their social and emotional needs, which research has shown to be equally important in making academic strides and high school graduation a real possibility.[37]

I. Individualized Learning Plans

Upon admission to Fifth Arrow each student will be assigned to a teacher with whom they will have twice weekly, if not daily contact, in addition to having consistent contact with specific subject matter teachers, and support staff. Students, parents, and the assigned teacher will partner to create an individualized learning plan (ILP) that respects and meets the needs of the student and their responsibilities outside of school. The ILP is tailored to fit each student's ability and learning level, and students are monitored weekly by their assigned teacher to ensure progress. A study by Tyler and Lofstrom on programs designed to reduce high school dropout rates found that close mentoring and monitoring of students was a vital factor of successful programs.[38] Teachers will be trained and expected to be vigilant in identifying logistical and/or personal issues that may be hindering students from making academic progress. Also, students will be provided supplementary and support services to address impediments to advancement. The frequent one-on-one interaction between students and teachers will make it possible for barriers in a student's life to be discovered and addressed early, ensuring minimal disruption to student goals. The ILPs

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[36] Burd-Sharps, S., & Lewis, K. (2012, September 1). One in Seven: Ranking Youth Disconnection in the 25 Largest Metro Areas. Retrieved from http://www.measureofamerica.org/one-in-seven/

[37] Durlak, J.A., Weissberg, R.P., Dymnicki, A.B., Taylor, R.D., and K.B. Schellinger. 2011. The impact of enhancing students' social and emotional learning: A meta-analysis of school-based universal interventions. Child Development, 82, 405-432

[38] Tyler, J. H., & Lofstrom, M. (2009). Finishing high school: Alternative pathways and dropout recovery. *The future of children*, *19*(1), 77-103.

will include strategies, practices, and content to inform and encourage students both academically and socially. For example, many students who are credit deficient do not understand how far behind in credits they are, nor have they ever been given the chance to keep track of their credit earning potential or the credits they have earned for graduation. Setting their own graduation date targets, as well as keeping track of their progress is an invaluable motivation tool and a life skill that promotes continued success. Additionally, ILPs help students explore career options and develop skills that lead to post-secondary success, which may include behavior and character development. Above all, ILPs are vital to Fifth Arrow's educational program since they develop and utilize strong teacher-student relationships, which have been shown to increase academic achievement and improve social-emotional adjustment for low-income youth.[39] Social-emotional development is critical, and a recent analysis by the Center for Benefit-Cost Analysis at Teacher's College found that there was a positive association between social-emotional skills and academic achievement.[40] Moreover, the authors underscore the far-reaching value of social-emotional skills since they have long-term behavioral and attitudinal effects.[41] Furthermore, research has shown that positive one-on-one interactions between students and adults have been documented to reduce students' feelings of alienation in school as well as move at-risk students toward their graduation goals and beyond.[42] [43]

II. METHODS OF INSTRUCTION

Instruction and tutoring will be offered in a manner flexible enough for students to take advantage of the unique structure of the curriculum and to provide additional support to students as they matriculate through their ILPs. Multiple formats for presenting curriculum allow the access that students need for time flexibility and portability to complete schoolwork on buses, during work breaks, during their child's naps, etc. Portions of courses, and in some cases, complete online courses in specific subjects will be part of the curriculum. Fifth Arrow's instructional materials will help students come prepared for individual meetings with their teachers and classes, ready to engage and apply new knowledge or seek deeper understanding, much like the structure of flipped classrooms. Teachers will meet NCLB highly qualified requirements, and be trained in current research-based teaching practices of effective student engagement, especially for students who have had negative classroom-based experiences in the past.

III. ADDITIONAL SUPPORTS

Fifth Arrow will provide access to wrap-around services that will support the needs of at-risk students so they can effectively focus on school work. These services will be provided at the schools or through referral to support services, and will include academic enrichment, tutoring, and mentoring. Also, Fifth Arrow may partner with community non-profits and state agencies to connect students to primary health, mental health, and dental care services. Fifth Arrow also intends to locate near accessible public transportation so that students will be able to travel safely and reliably on the bus, light rail or train to and from school. Additionally, for students who may struggle to afford public transportation, Fifth Arrow will provide students with tokens to ride the

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[39] Murray, C., & Malmgren, K. (2005). Implementing a teacher–student relationship program in a high-poverty urban school: Effects on social, emotional, and academic adjustment and lessons learned. Journal of School Psychology, 43(2), 137-152

[40] Belfield, C., Bowden, B., Klapp, A., Levin, H., Shand, R., & Zander, S. (2015). The economic value of social and emotional learning.

[41] Belfield, C., Bowden, B., Klapp, A., Levin, H., Shand, R., & Zander, S. (2015). The economic value of social and emotional learning.

[42] Brush, C., & Jones, B. (2002). Student voices: Why school works for alternative high school students. *Salem, OR: Oregon Department of Education*, 629-640.

[43] Muller, C. (2001). The role of caring in the teacher-student relationship for at-risk students. *Sociological inquiry*, *71*(2), 241-255.

bus or light rail. Lastly, the model includes post-secondary counseling, helping students to focus on the development of a college or career path. Career education will be intensive, and support for college selection and admission will be provided to all students. Students in the target population, who are not likely to have considered college to be a viable option, will be exposed to multiple opportunities to explore and redefine this option.

C. Class Size and Student-Teacher Ratio

Fifth Arrow is committed to ensuring a personalized learning environment where all students can succeed. Each teacher will facilitate the progress of 50 students over the course of a week and assist these students with multiple subjects towards graduation. In addition to developing ILPs with students and parents, these teachers will track student progress, administer assessments, maintain student portfolios, analyze data, and support students' social-emotional needs. Teachers also hold daily office hours for students to go over material they struggle to comprehend.

Also, the daily general education student-teacher ratio during instruction will be 31:1 the first year, and 33:1 the second and third year. It is important to note that the student to teacher ratios are the combined student rosters for each class, and not all students are present at once since there are different class sessions throughout the day. Finally, small group instruction classes will not exceed 15 students, allowing for differentiation and one-on-one support for struggling students. This model will address the needs of Fifth Arrow's population because it will allow students to access instruction on a more personal level and will keep students from getting lost in a large impersonal environment, which is more prevalent in a traditional high school model. A study by Levin, Belfield, Muennig, and Rouse found that small size, high levels of personalization, and high academic expectations - foundational components of Fifth Arrow's educational model - were common factors of successful programs dedicated to increasing high school graduation rates.[44] These factors contribute to strong relationships between students and teachers, where they can be accountable to one another.[45] To continue, staff will be selected for their ability to work with at-risk youth and will receive data-driven professional development through professional learning communities that focus on closing the achievement gap. The small group instruction, mentoring and monitoring, and flexible format of Fifth Arrow's educational program are research-based practices that have been shown to increase high school completion rates.[46] [47]

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[44] Levin, H., Belfield, C., Muennig, P., & Rouse, C. (2007). *The costs and benefits of an excellent education for all of America's children* (Vol. 9). New York: Teachers College, Columbia University.
[45] Levin, H., Belfield, C., Muennig, P., & Rouse, C. (2007). *The costs and benefits of an excellent education for all of America's children* (Vol. 9). New York: Teachers College, Columbia University.
[46] Tyler, J. H., & Lofstrom, M. (2009). Finishing high school: Alternative pathways and dropout recovery. *The future of children*, *19*(1), 77-103.
[47] Hahn, R. A., Knopf, J. A., Wilson, S. J., Truman, B. I., Milstein, B., Johnson, R. L., ... & Community Preventive Services Task Force. (2015). Programs to increase high school completion: a Community Guide systematic health equity review. *American journal of preventive medicine*, *48*(5), 599-608.