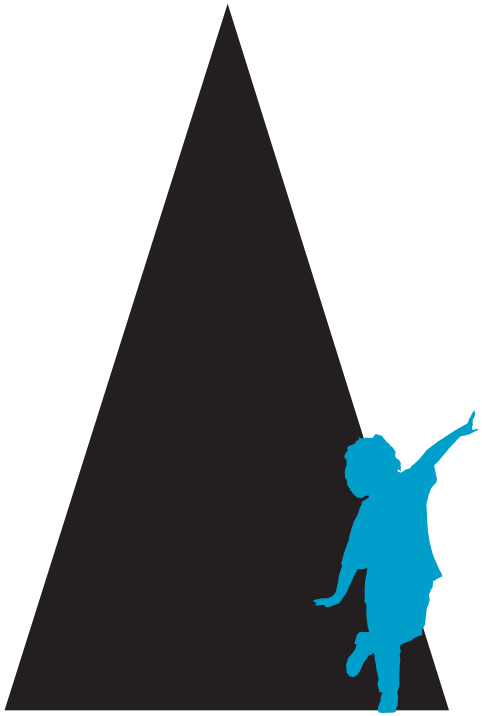


Educational Specifications ■ Alexandria City Public Schools

JUNE 2016

PRE-KINDERGARTEN CENTER

ACPS


forward



The City of Alexandria (the City) and the **Alexandria City Public School Division** (ACPS) joined together in the fall of 2012 to develop a Long Range Educational Facilities Plan (LREFP) to improve facilities planning, accommodate the growing student population, and enhance educational programs and services. In the spring of 2016, as part of a Phase Two LREFP update, ACPS engaged Brailsford & Dunlavey and Studio27 ("the Planning Team") to develop Pre-Kindergarten Center Educational Specifications. An Educational Specification ("Ed Spec") is the guiding document used for capital improvement planning that describes the proposed outcomes of a school modernization or new construction project.

The document presented here is a result of the application of professional technical expertise and the collaboration of invested and knowledgeable stakeholders. The document is outlined in the following table of contents.

The recommended program and concepts presented herein constitute the professional opinions of the Planning Team based on the assumptions and conditions detailed throughout; however, the Board of Education will make the final recommendation. It is recommended this document be comprehensively updated every 10 years and be a living document updated by the Facilities Planning Department.

The **Planning Team** was comprised of the following individuals //

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The Planning Team wishes to acknowledge the support, cooperation, and effort of all the ACPS and City staff who contributed to the planning effort, in particular //

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And all the faculty, staff, and committee members who joined the effort throughout.

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INTRODUCTION ///

purpose

The purpose of these educational specifications ("Ed Specs") is to serve as the guiding recipe and benchmark for future school renovations and new construction projects for Alexandria City Public Schools. The Ed Specs should encourage a school facility design that lends itself to a culturally competent student workplace for a broad range of diverse learners in our early childhood education centers.

Per the National School Boards Association //

> "The purpose of educational specifications ("Ed Specs") is to define the programmatic, functional, spatial, and environmental requirements of the educational facility, whether new or remodeled, in written and graphic form for review, clarification, and agreement as to scope of work and design requirements by the architect, engineer, and other professionals working on the building design."

The Ed Specs tell the story of the school facility and how the built learning environment will support the academic programs and vision of school leadership. This generic Pre-Kindergarten Center (PKC) Ed Spec is primarily intended for use as a planning guide by architects and project planners but it is also intended to serve as a communication and benchmarking tool for all project stakeholders: students, parents, and families; faculty and administrators, civic leaders and community members; and project design and construction partners.

The general concept embodied in the Ed Specs is to provide adequate details for proposed spaces while leaving ample flexibility for creativity and options in design by the architects. They define expectations among project stakeholders but do not limit creativity. The Ed Specs are also a living document; amendments can be discussed, developed and issued over time.

Project Planning //
During the planning phase of a project, the Ed Spec should be utilized to understand and develop future project scopes of work and budgets. The Ed Spec should be included in project procurements to ensure that interested vendors are clearly and uniformly communicated the intent of a project and therefore can provide well informed responses to meet actual project needs. While the unique site locations of new schools may necessitate floor plan modifications, the program and space requirements should be modified only as allowed within the parameters of this document.

Project Implementation //
During the implementation phase, the Ed Specs should be utilized for quality control, allowing ACPS to measure project deliverables against the stated benchmarks and standards. Design deliverables and construction should be reviewed for compliance with the standards and goals stated herein noting, however, that flexibility of +/- 10% is allowed when applying square footage requirements (particularly in the case of renovating an existing structure). Additionally, the Ed Spec will help provide the foundational support for project decisions during implementation as responses can be measured against their compliance with the Ed Spec.

Project Turnover and Occupancy //
Ed Specs serve as a valuable aid in the turnover of the facility to staff and administrators and other occupants. It is a user-friendly document that allows people outside of design and construction professionals to understand the building and the intent of its spaces.

process

Planning a state-of-the-art school requires consideration of several influencing factors:

- the historical and forthcoming context of the community
- the current and future learning pedagogy and curricular goals
- the technical expertise of the faculty and administrators
- national and regional trends and benchmarks
- the strategic visioning goals and objectives of the Division

Developing the plan requires the cooperative efforts of facility specialists, administrators, faculty, and instructional consultants, in addition to the careful involvement of outside partners and community stakeholders. In order to create the best possible learning environment for children, an effort has been made to incorporate the best ideas from existing plans and facilities and anticipate future needs for educating Alexandria's children.

As mentioned, ACPS and the City are working together to develop a long range educational facilities plan in order to develop a thoroughly coordinated plan that responds to projected enrollment growth and considers city-wide needs in a comprehensive manner. The LREFP process, shown in Figure 1.0, focuses on updating the LREFP based on technical details from the ACPS School Board approved Educational Specifications, Enrollment Forecasts, and Current Facility Conditions and Capacities.

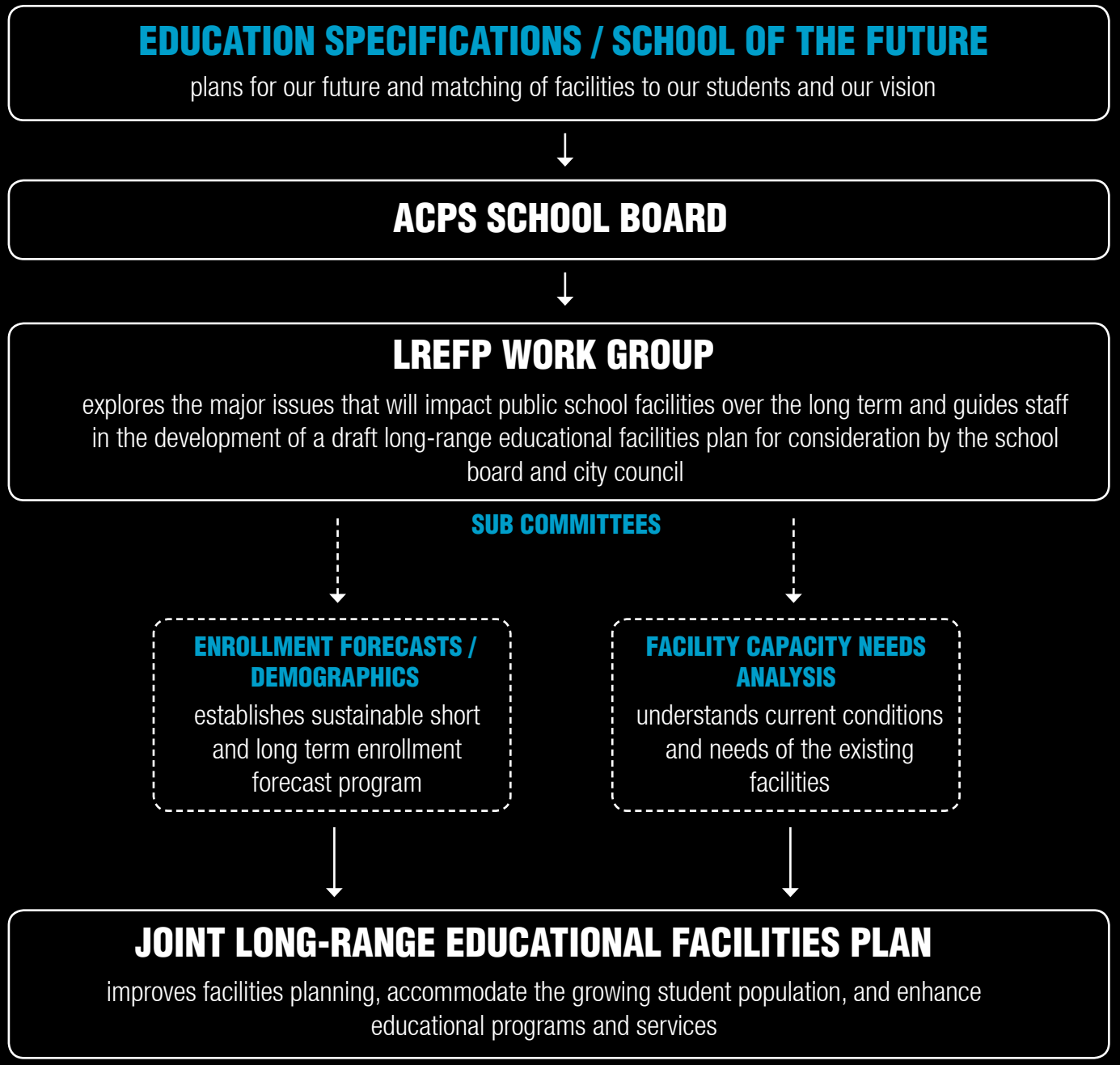


FIG. 1.0 /// **PROCESS DIAGRAM**

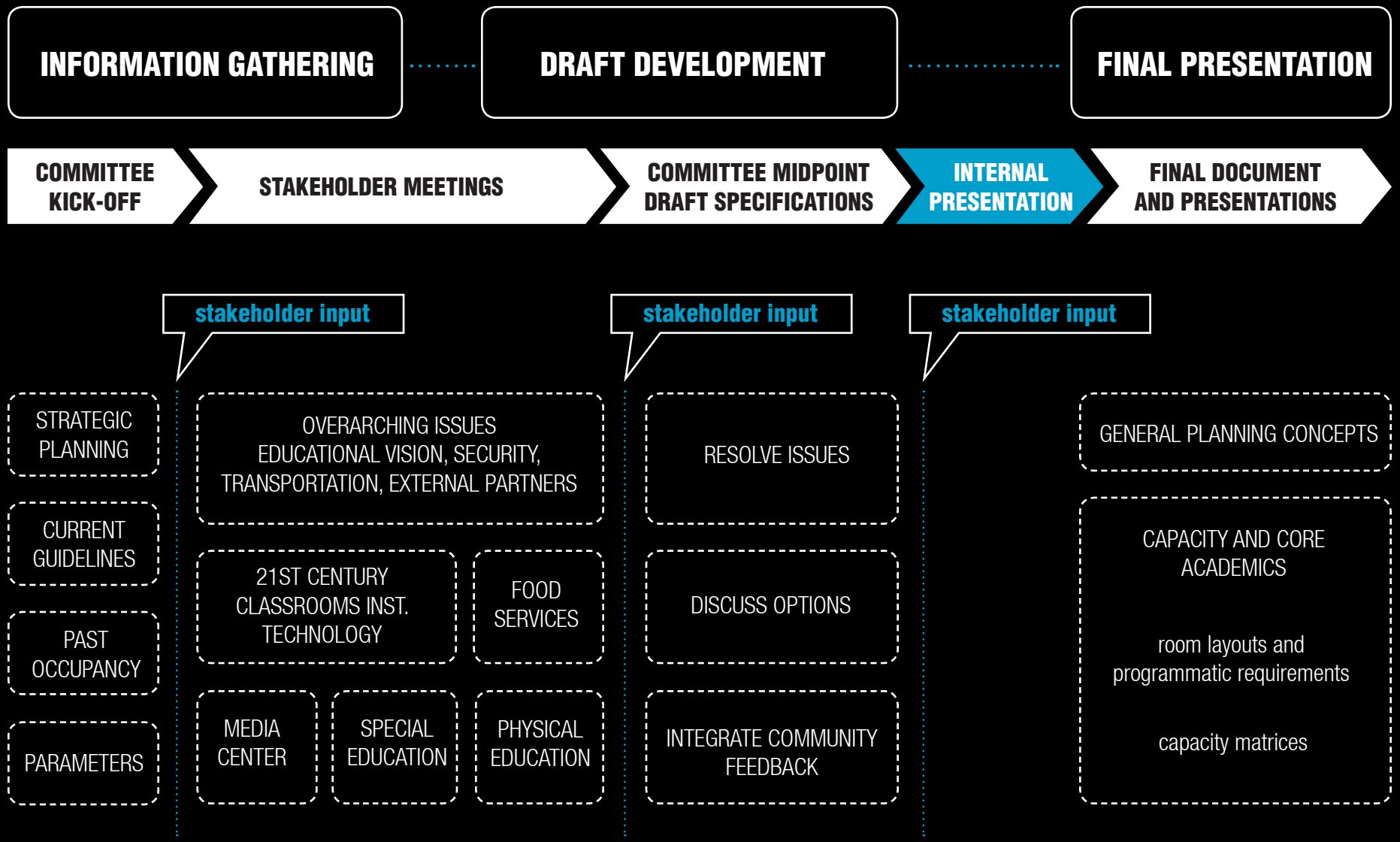


FIG. 1.1 /// **WORKFLOW DIAGRAM**

national trends in educational facility planning

Each school system is unique from an educational and building program perspective. When balancing national, state, and local regulations, it is important to understand that one size does not fit all. The trends and planning principles presented here are intended to provide context to the formulation and development of this document.

21st Century Learners //
Learning environments should be planned and designed with consideration of supporting all learners: auditory, tactile, kinesthetic, and visual. Individual learning styles affect the way in which individual students:

- Concentrate in their immediate surroundings
- Proccess information
- Make decisions and solve problems
- Complete tasks and assignments
- Behavior and interactions with others
- Retain new information

Educational facility planning and design can help maximize learning by considering differentiated instruction and recognize that one size does not fit all when it comes to learning environments.

Today's learners were born in a digital era and are used to having the world of information at their fingertips and in their pockets. Today, learning can occur "anytime, any place, any path, and any pace." Classrooms are transitioning from environments focused on teacher-directed whole-group instruction to learner-centered workplaces that support a collaborative culture for project-based student work.

Schools and homes continue to be important places for learning, but not exclusively. Understanding the importance of the "third learning space" - the many places where students learn in ways not bounded by the schedule of the school day, the limitations of the four classroom walls, or the location of one's home - is a critical component in planning and designing innovative, inspirational, and thriving educational environments.

Classrooms & Technology //
The 'classroom of the future' should be more personalized, student-directed, collaborative, interdisciplinary, and hands-on than those of even 10 years ago. As the focus of education moves away from just transmitting information to developing creative problem solving and communication skills, the classroom setting is morphing into a beehive of activity – a learning studio.

At different times, students may be working alone, in pairs, or in groups:

- Working alone: reading, writing, interacting with the computer, or just thinking
- Working together in pairs or groups: dissecting a problem or reading and reacting to one another's written work, role-playing, or sharing ideas, opinions, and experiences
- Interacting with the teacher and the whole class: listening, making presentations, asking questions or brainstorming ideas

Teaching methods should address a variety of learning styles and children with disabilities are educated alongside their non-disabled peers.

The classroom of the future should no longer be just one-directional with rows of desks facing the 'front' of the room. It should have a variety of focal points with mobile resources to support learning, flexible furniture, and robust technology. Rooms should also range in size and purpose from small incubator and assessment spaces to large seminar and presentation areas. Corridors and informal learning spaces should create a seamless and extended learning environment.

Technology is infused seamlessly into the education program, and physical building and wireless connectivity allow for learning to occur whenever and wherever. Classrooms are versatile, flexible, and adaptable to support different mediums.

Libraries //
21st century school libraries are no longer quiet book-lined storage spaces for reading. Today, the library is an interactive studio of social collaboration and research for teachers and students. They are the learning 'commons' - an extension of the classroom and the social heart of the school. As such, they should incorporate spaces for quiet, solitary reading and spaces for group presentations, collaboration, and socialization.

It is important that the space be a comfortable and inviting one for young learners. The room should not feel cavernous. Rather, libraries should be outfitted with furniture that is comfortable and appropriately sized to the age of the student.

Furniture, seating, and shelving should flexible and arranged to create multiple natural focal points. These areas should be sized for large-group story times and presentations, small-group resource pockets, and individual reading nooks. Small-group rooms, located off the library space, can accommodate student needs and add important flexibility to the space.

New Early Childhood Education Center libraries will incorporate digital technology. Interactive electronic presentation devices help introduce students to educational technology while meeting the needs of a generation that is growing up with technology as a constant presence.

Building and Grounds //
The school building itself is a learning tool and a community asset. The buildings create a sense of identity and the quality of architecture instills a sense of place and pride. The architecture considers learning opportunities over the entire campus, including school grounds and landscaping.

Transparency of spaces helps foster an internal sense of community and excitement about the learning activities occurring within. The use of glass allows for visual connections externally and internally. Front entrances are inviting and welcoming for all community members – parents, families, neighbors. The school is a hub of activity before and after school.

Outdoor spaces are incredibly important to the learning experience. They provide students with the opportunity to learn about textures, water, plants, animals, and the

natural world. Playgrounds, courtyards, and other outdoor spaces should be deliberately planned to complement the indoor learning environment and expand the school pedagogy.

Evidence-Based Environmental Elements //
Evidenced-based design is the consideration of credible research findings in the planning and design process with a goal of achieving positive outcomes. Researchers have presented findings that link measurable outcomes such as student attendance, academic performance, faculty retention, and disciplinary actions. More specifically, several design elements have been connected to these outcomes: lighting quality, indoor air quality, acoustics, and furniture design.

Lighting Quality //
The Heschong Mahone Group found statistical correlations between the amount of daylight in an elementary school classroom and the performance of students on standardized math and reading tests in 1999. Since then, case studies and further research have supported this finding and the educational facility planning community has generally accepted the classroom design parameters listed in the appendix.

Goal: Improve natural and artificial lighting in classrooms.

Environmental / Air Quality //
According to the US Center for Disease Control and Prevention, American children miss approximately 14 million school days each year due to asthma. Controlling environmental factors such as dust, pollen, and carbon monoxide could help prevent more than 65% of asthma cases in elementary-school-age students according to the American Journal of Respiratory and Critical Care Medicine. The classroom design parameters listed in the appendix should be considered when modernizing a school facility.

Goal: To ensure comfortable rooms, address temperature control, ventilation, air filtration, carbon dioxide levels, and HVAC background noise.

Acoustics //
Research links the importance of maintaining appropriate acoustic conditions for student learning. This relates to noise from external sources and reverberation in the classroom and is linked to academic achievement, behavior, attention, and academic concentration. Acoustics are also important for teacher wellness and avoiding straining vocal cords while attempting to speak over noise. Classroom design parameters are generally accepted as outlined in the appendix.

Goal: Limiting reverberation and background noise and improving sound isolation.

Ergonomics //
A 2007 study compared adjustable furniture in schools to traditional fixed furniture. Students using adjustable furniture were found to have higher grades than those in the control group using traditional school furniture. Characteristics of furniture that promote good posture should be considered as well as adjustable tables and chairs that allow students of varying sizes and body types

to improve their comfort levels when sitting for long periods of time. Research studies continue to explore this issue.

In summary, these national trends provide an important context for many of the ideas that ACPS is working to implement and how those concepts are articulated within this document.

City of Alexandria: Demographic and Economic Context //
The City of Alexandria is divided into 18 planning neighborhoods, each with its own unique history and atmosphere ranging from the urban historic neighborhoods close to the District of Columbia to the suburban western communities. In general, most neighborhoods consist of higher income professionals seeking a safe, walkable community close to DC. Typical of the DC Metro area, people come from all over the world – ACPS records 127 countries of birth and 115 native languages.

According to the most recent census data released in February 2011, the city was 60% white, 22% Black and African American, 16% Hispanic, and approximately 2% other. Approximately 24% of the population is foreign born and just over ten percent of the population is school-aged children. However, ACPS is more diverse:

- Asian: 4.68%
- Black: 30.13%
- Hispanic: 35.59%
- White: 26.76%
- Native Hawaiian/Pacific Islander: 0.22%
- Multi-racial: 2.37%

As a percentage of total population, the school-age population in Alexandria is lower than the United States as a whole. This is due primarily to the fact that much of the city's historic growth in the last 60 years has been from young adults moving to the Washington, DC metropolitan area for jobs. As a result, the city has become more urbanized with over 60% of the housing stock being multifamily and an average household size of just over two persons.

The school-age population in Alexandria had been steadily declining since 1970, but the decline tapered off in 2007. Based on recent trends and recent work with the city's planning department, the city has a projected growth of 8%, while ACPS believes that enrollment growth over the next five years will be 19%. This projected growth outpaces the citywide growth rate by nearly 2.5 times.

To underscore the diversity of the student population in Alexandria it is important to note that although median incomes in the city are among the highest in the region, approximately 60% of ACPS students are eligible for free- or reduced- meals programs. Further, the division has a strong international presence with English Language Learner (ELL) students accounting for nearly 29% of the school population.

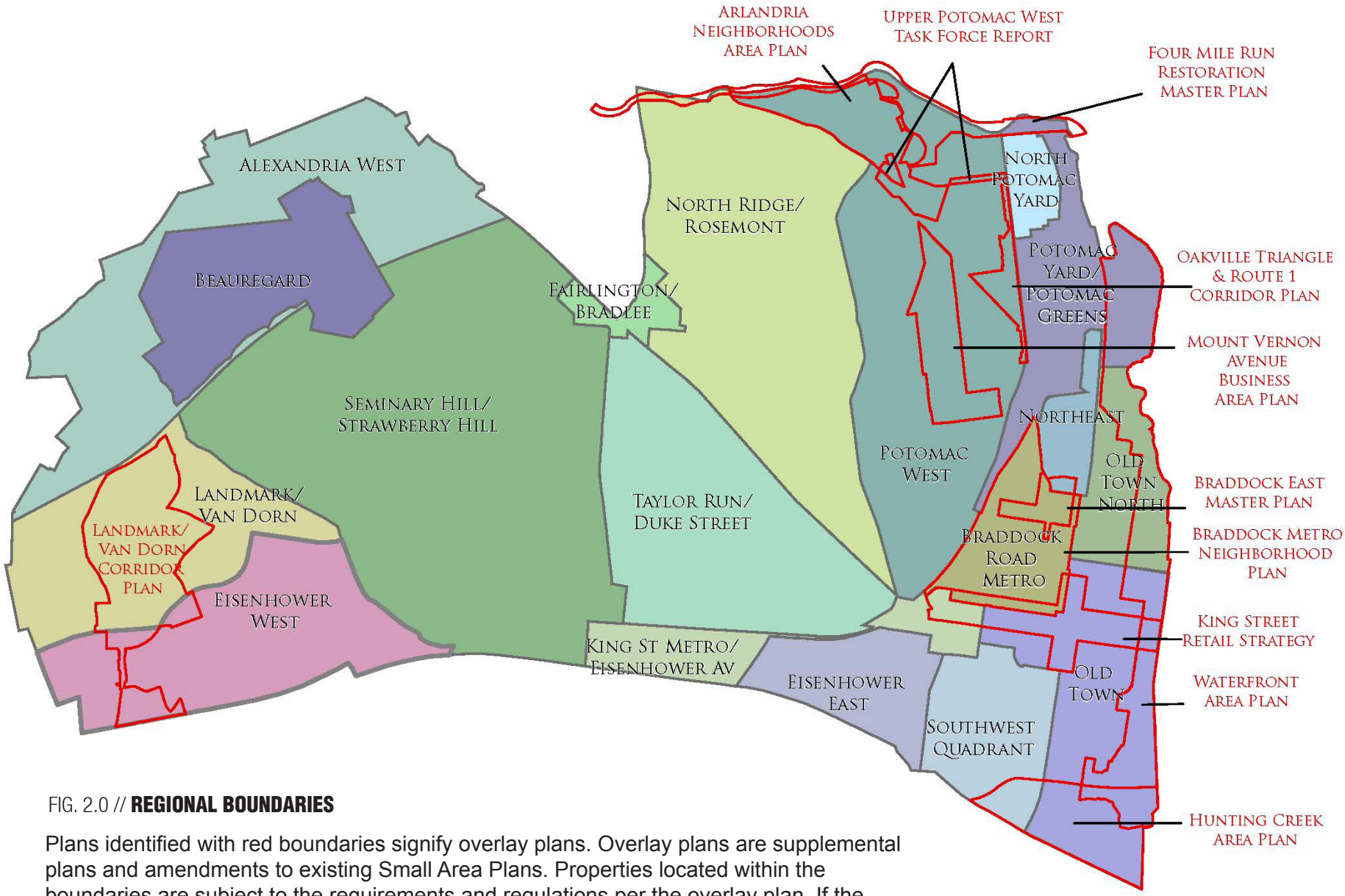


FIG. 2.0 // **REGIONAL BOUNDARIES**

Plans identified with red boundaries signify overlay plans. Overlay plans are supplemental plans and amendments to existing Small Area Plans. Properties located within the boundaries are subject to the requirements and regulations per the overlay plan. If the overlay plan is silent to or does not address a specific issue or topic, the underlying Small Area Plan applies.

	ENROLLMENT BY GRADE								ENROLLMENT BY SUBGROUP						
SCHOOL	PK	KG	1st	2nd	3rd	4th	5th	TOTAL	FARM	SWD	ELL	ASIAN	BLACK	HISPANIC	WHITE
Barrett	19	88	81	80	85	63	61	477	144	73	86	12	80	116	246
Cora Kelly	2	58	62	70	53	60	52	357	285	58	195	4	80	248	26
MacArthur		130	129	118	114	112	109	712	222	66	110	21	146	138	372
Polk		126	125	118	145	117	112	743	469	68	284	36	272	237	170
Jeff-Houston	53	70	56	47	64	47	38	375	270	68	60	5	231	80	51
Adams	127	174	159	165	145	130	117	1017	642	150	459	93	354	367	184
Mason		103	106	103	103	69	74	558	154	44	133	5	29	180	320
Lyles-Crouch		74	70	82	70	67	50	413	111	35	37	7	132	33	222
Maury		78	82	59	84	74	65	442	139	35	26	6	131	40	252
Mt. Vernon		154	142	147	152	136	122	853	443	71	380	12	57	484	282
P. Henry	95	109	95	108	94	71	71	643	481	61	214	39	327	192	68
Tucker		151	135	131	117	113	102	749	407	62	249	56	304	199	164
Ramsay	32	151	160	139	150	142	128	902	735	42	586	69	221	506	86
Total	328	1467	1402	1365	1377	1199	1101	8239	4502	583	2819	365	2364	2820	2443
SCHOOL	6th	7th	8th	9th	10th	11th	12th PG	TOTAL	FARM	SWD	ELL	ASIAN	BLACK	HISPANIC	WHITE
Jeff-Houston	68	53	29					151	106	34	12	5	95	31	19
GW	462	405	420					1287	538	153	153	28	268	415	536
Hammond	428	498	473					1399	1046	158	361	97	546	566	174
M. Howard				854				854	465	94	187	44	267	304	209
TC Williams				121	1069	814	736	2740	1598	264	657	153	885	1073	544
CFC		2	1	4	10	4	2	23	18	4	8	0	12	11	0
Nell				14	3	0	0	17	5	0	3	0	0	17	0
Total	959	958	923	993	1082	818	738	6471	3776	707	1381	327	2073	2417	1482
GRAND TOTAL								**14710**	**8278**	**1540**	**4200**	**692**	**4437**	**5237**	**3925**

FIG. 2.1 // **ENROLLMENT STUDENT DATA**

* Provided by ACPS

ACPS Learning and Teaching Model //
Learning and teaching in ACPS is a well-executed balance between a rigorous curriculum, proven instructional strategies (pedagogy), and relationships with students that communicate high expectations and commitment to student success.

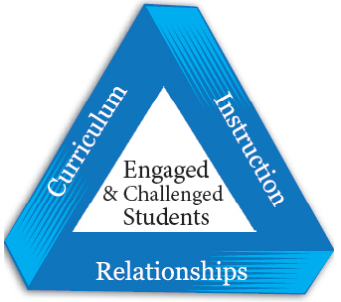
ACPS has developed and uses a 21st century curriculum that is focused on helping students become critical thinkers and problem solvers. In addition to helping students acquire declarative and procedural knowledge, each academic unit has a focus on higher-order thinking skills to ensure students are developing critical thinking skills needed for post-secondary success: reading complex text, writing at a post-secondary level, analyzing and interpreting data, and participating in discourse across the disciplines.

ACPS is implementing a standardized curriculum across the Division with the intention of providing purposeful and consistent education across the system. The standardized curriculum will include interdisciplinary integration and cross-collaboration of content for both students and staff. A standardized approach will maintain the integrity of the curriculum across the system, which allows the Division to track student progress and development. Individual schools will maintain control of the delivery method and instruction. The early childhood curriculum will align with the upper grades.

Instructional Methods //
Instructional methods vary with grade level, but maintain continuity from early childhood education through the primary, intermediate, and secondary grades. Predominant elements include:

- Sensory experiences
- Integrated cross-content learning
- Flexible groupings
- Extended-day learning opportunities
- Parent involvement and volunteer activities

The Division is committed to using purposeful differentiation for all students to meet each student's individual learning needs. This differentiation includes students with disabilities as well as students who are advanced learners, all of whom require specialized curriculum



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strategic visioning

In 2014, ACPS was guided through a series of visioning sessions with educators and administrators that challenged them to clarify their expectations related to facility operations, sustainability, architectural quality, space priorities, and the community context. The visioning sessions focused on identifying gaps between ACPS' future goals and its current realities. An update to this visioning was performed in 2016. The following narrative summarizes the areas of greatest dissonance and formulates the concept for the construction and operation of a school of the future in Alexandria.

Programmatic Structure, Scale, and Proportionality //
ACPS desires to offer comprehensive primary and secondary education facilities that provide students with access to educational and extracurricular learning opportunities in local neighborhood communities. The Division also desires to provide citywide early childhood education by providing regionally-located centers that increase the amount of early childhood education available. A center will also centralize early childhood expertise for stronger collaboration and professional development. All schools will be sized to offer students a strong sense of culture while also ensuring students have access to teachers and administrators as needed. The system's desire for students to learn whenever and wherever drives the need for future facilities to implement a spatial organization that provides both formal and informal learning spaces and maximizes collaboration and interaction between students and faculty.

School designs should focus on creating collaborative, interdisciplinary, and adaptable learning spaces supported by a robust and seamless integration of technology, and flexible and ergonomic furniture. Incorporating an overall organization of small learning communities with breakout spaces in hallways known as extended learning areas (ELAs), collaborative spaces in classrooms, and spaces that facilitate chance interactions throughout the school should allow teachers to collaborate across disciplines and tailor learning objectives and lessons to students' individual needs.

Providing multifunctional spaces for third-party partner and community programs that extend educational and extra-curricular services to students, families, and the community is a priority. The facility should operate as one organism that can be segmented into different functions and zones, depending on the time of day and use.

Community Context //
ACPS school facilities and grounds should serve as neighborhood assets and centers for parent, family, and community interaction and engagement. Parental and family support plays a critical role in the success of students. ACPS students and families come from diverse backgrounds and schools should be welcoming and inviting places that include dedicated space for parent and family engagement as well as spaces available for community and partnership use.

Each school community is unique, and designers should consider what spaces best support the community's needs. However, all schools should be planned and designed to support community use during non-school hours. Implementing a secure separation between the academic core and the shared-use spaces along with the

careful application of active and passive design strategies should create safe and secure learning environments.

As previously defined, Early Childhood Education Centers ECEC will be regional facilities that offer early childhood education across the division. Elementary schools are essential components of a walkable neighborhood community. Therefore, new elementary schools should be located within neighborhood communities so that when safe, students can walk to school.

Future high school facilities will be the anchor of their communities. They will offer both choice and specialty programming to all students. High school facilities will respond to the needs and demands of the local community and will serve students from across the city.

Organizational and Operational Paradigm //
ACPS believes an integrated, interdisciplinary team approach will increase student achievement and faculty collaboration. The priority of the Division is to advance student performance and success by enhancing the overall learning experience for students through a collaborative team approach. This is best facilitated with small learning communities, extended learning environments, and a departmental organization of spaces. Libraries should be seen as the 'learning commons' and be utilized regularly as an extension of teachers classrooms and workspaces.

ACPS desires to increase inter-student collaboration and group learning activities. To support this, flexible and adaptable, informal, and formal teaching spaces are required. Emphasis should be on spaces and configurations that support critical thinking and project-based learning, ideally within groups of four students and the ability to break out of formal learning environments. Utilizing a push-in and team-teaching approach, special education students should learn in the same collaborative learning environment as their peers to the maximum extent possible.

Architectural and Construction Quality //
ACPS has a strong belief that high-quality architecture has a positive influence on student success and faculty retention and it is committed to delivering high quality, state-of-the-art, and sustainable facilities to students, faculty, and the community. This belief applies to the external and internal qualities of the facility. The school facility and grounds are considered to be a learning tool and creativity in design and architecture is a priority.

Quality of design and engineering should focus on areas that most impact the learning environment with a particular emphasis on incorporating researched-based facility elements such as enhanced natural lighting, acoustics, air quality, climate control and technology, that directly impact student achievement and educator effectiveness. Externally, the architecture must be respectful of the historical and cultural context of the community while simultaneously inspiring students and the public.

Materials and system selections should consider extended life cycles. Building systems, materials, and finishes must be resilient, easy to maintain, and create a positive, aesthetically-pleasing learning environment. The life cycle of materials should balance quality and potential for future

costs in an effort to ensure appropriate use of public funds.

ACPS 2020 //
In June of 2015, ACPS formally adopted a strategic plan to act as a foundation for all the actions of the school division. It directs the actions that the division takes in meeting the goals and aspirations of the Alexandria community and guides the activities of employees and leaders as well as the expenditure of all funds entrusted to the school board. While the plan reaches far beyond school buildings to reach all aspects of student life, a project like the Pre-Kindergarten Center (PKC) can help in fulfilling all of its six specific goals:

1 **Academic Excellence and Educational Equity**:
Every student will be academically successful and prepared for life, work, and college.

2 **Family and Community Engagement**:
ACPS will partner with families and the community in the education of Alexandria's youth.

3 **An Exemplary Staff**:
ACPS will recruit, develop, support, and retain a staff that meets the needs of every student.

4 **Facilities and the Learning Environment**:
ACPS will provide optimal and equitable learning environments.

5 **Health and Wellness**:
ACPS will promote efforts to enable students to be healthy and ready to learn.

6 **Effective and Efficient Operations**:
ACPS will be efficient, effective, and transparent in its business operations.

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PLANNING CONCEPTS ///

The following sections elaborate on the planning and design concepts for a prototypical Pre-Kindergarten Center with an enrollment of approximately 360 students. ACPS is considering implementing Pre-Kindergarten Centers through tenant fit-outs of commercially-available space in the city. The program expects to grow over time and require additional facilities. These facilities will be distributed across the city to serve its growing population. Current planning anticipates an initial facility of approximately 20 classrooms to serve the immediate need for early childhood education space. Over the next five years, separate stand-alone facilities may be established to provide a majority of the City's growing early childhood needs. Architects and designers should be mindful that the following sections are a guideline and a tool to advance the design of a Pre-Kindergarten Center. These rules should be vetted throughout the schematic design phase by coordinating with the professional planning staff of ACPS and its stakeholders.

capacity

Every school project begins with establishing the number of students who will be served when the project is complete or the 'capacity'. Capacity is the primary driver in determining the number, type, and size of the spaces in the new or modernized building.

For the purposes of this planning document, this educational specification assumes Pre-Kindergarten Center capacities will range between 320 and 400 students. This prototype is based on a 20-classroom or 400-student facility, for illustration only. Other Pre-Kindergarten Centers, located in Richmond, serve between 275 and 850 students.

Simply defined, school capacity is a product of the number of classrooms at a school and the student stations assigned to each room type. Only classrooms that are 600 square feet or more with a teacher and students regularly assigned to the space count toward full-time capacity. For early childhood education, small instructional spaces and specialized labs including art, music, or resource are not part of the capacity calculation. It is possible for a school's capacity to change in minor ways from year to year based on average class sizes (determined by the budget) or changes in the number and type of programs.

Currently, the ACPS early childhood budgeted class size cap is not to exceed 16 students in Virginia Preschool Initiative ('VPI') classrooms without permission from the superintendent. The maximum class size in VPI classes is 18 students, with permission. Head Start requires that no more than 17 students be present in double-session classes and no more than 20 students be present in regular-session classes.

Figure 3.1 on the opposite page identifies class sizes for school divisions surrounding the City of Alexandria in addition to those recommended by the code of Virginia. The classroom size limits enunciated by the ACPS school board are generally in line with the regional averages.

Regional Benchmarks //
Class size caps establish a maximum desirable class size but the average class size in ACPS is lower. The lower class sizes are more in keeping with the division's long-range policies and goals.

FIG. 3.0 // **CLASS SIZE**

ROOM TYPE	RANGE OF CLASS SIZE	TARGET FOR PLANNING
VPI	16-18	16
Head Start	17-20	18
Specialized Instruction	6-12	10

FIG. 3.1 // **REGIONAL BENCHMARKS**

SPACE	ENROLLMENT			RECOMMENDED / AVERAGE CLASS SIZE PER GRADE								
	Pre-K (total)[1]	H.S.[2]	K-5th[1]	Pre-K	H.S.	VPI	K	1	2	3	4	5
Arlington[4]	987	204	12,577	23	20	18	24	24	26	26	27	27
Fairfax[5]	3,506	1,635	83,624	NP	20	18	22	21	21	21	23	23
Loudoun[6]	1,052	109	34,919	NP	20	18	22	22	22	22	22	22
Prince William[7]	1,205	397	40,057	NP	20	18	24	24	24	24	25	25
District of Columbia[8]	5,615	5,952	22,116	18	20	---	20	20	20	23	23	23
Average	2,473	1,659	38,659	21	20	18	22	22	23	23	24	24
United States[9]	1,336,000	824,947	22,909,000	22	20	---	22	22	22	22	22	22
Alexandria	275	--------	7,918	18	20	16	20	22	22	24	24	24

Note: Pre-K numbers from the Department of Education include students enrolled in Virginia Preschool Initiative (VPI) classes. They do no include Head Start students, unless those students are enrolled in the public school district as part of their Head Start program.

[1]Virginia Department of Education Fall Membership Data, 2015-2016
[2]Office of Head Start - Program Information Report (PIR) Enrollment Statistics Report - 2015
[3]Virginia Preschool Initiative Guidelines for the Virginia Preschool Initiative Application, 2016-2017
[4]http://www.apsva.us/cms/lib2/VA01000586/Centricity/Domain/11/2014-15%20class%20size%20report.pdf
[5]Fairfax County Public Schools Capacity and Utilization Dashboard, http://www.fcps.edu/fts/dashboard/presentation1.html
[6]Loudoun County Public Schools FY 16 Appropriated Budgets
[7]http://www.fcps.edu/fs/budget/wabe/2014.pdf
[8]Orr Elementary School Educational Specifications, September 2015
[9]National Center for Education Statistics, Projections of Educational Statistics to 2022 (2011), Schools and Staffing Survey (2011)

For the purposes of planning, the following class sizes should be used to calculate a planning capacity. It is important to size all classrooms to accommodate the maximum number of students even if the average is used for capacity planning. This allows for program flexibility and interchangeable uses year to year.

Once a capacity is proposed, many other areas of the building are sized to support the enrollment. The number of small group rooms, art and music labs, and support staff offices are based on staffing formulas. The size of the core areas such as library, dining and school nutrition services, physical education facilities, and site amenities are based on local and national benchmarks related to size.

The following chart (FIG.3.2) summarizes the breakdown of the proposed capacity for a prototype 360-student Pre-Kindergarten Center. The balance of this document outlines the spaces for this sample prototype.

Per the Guidelines for School Facilities in Virginia's Public Schools, the goal of the optional guidelines developed by the Virginia Department of Education is:

> "… to provide recommendations that will help local school divisions ensure that their school sites and facilities support the principles of good teaching and learning and promote sound educational programs."

The guidelines developed here by the project team respond to or exceed the Virginia State guidelines and recommendations. It is the responsibility of the architect to ensure the plans meet or exceed the current state guidelines at the time of actual project design in the event the state guidelines have changed and this document has not yet been updated to reflect those changes.

CORE ACADEMIC TOTAL	# OF CLASSROOMS	CAPACITY	TOTAL
Outdoor Area (when available)	1	0	0
Shared Classroom Toilet	12	0	0
Shared Classroom Storage	12	0	0
Shared Student Project Storage	4	0	0
Resource Classroom	3	0	0
Sensory Classroom	1	0	0
Workroom/Teacher Office	2	0	0
Pre-Kindergarten Classroom	20	18	360
Multipurpose/ELA	2	0	0
Total			**360**

FIG. 3.2 // **CLASSROOM CAPACITY**

program area summaries

The following section provides executive level narrative summaries of the core program space areas. Detailed descriptions of each space within a program area is provided later in this document.

Main Office-Reception/Administration/Student Services //
All school locations should include a double-perimeter approach where every visitor is guided through a secure exterior door into a secure holding vestibule prior to gaining access to the main office. As students, families, and other visitors enter an ACPS building, it is important that they are greeted with an inviting and well-organized front office suite. The main office should be located near the primary entrance to the school. The architect should consider security when designing the main office. The space must be organized to provide direct visual access to the entrance doors. Limiting the number of entry points into the high school is important for student safety and security. Visual access from the main office to the exterior vestibule is mandatory and every entrance to the school should have a CCTV IP camera.

Appropriately sized office spaces with an adjoining shared conference room and adjacent staff restroom should be provided. Occupational and physical therapy services are provided by ACPS staff who travel between multiple school locations. Within or near the main office, an appropriately-sized space that includes itinerant work stations and storage. The Family and Community Engagement center should be provided near or adjoining the main office. Other administrative functions can be dispersed throughout the school to encourage maximum student collaboration and connection.

Visitor parking should be located near the front door. Signage and building design should clearly indicate the school entrance. Immediately upon entry, visitors should be directed to the welcome center/main office. For security reasons, no visitor should be able to enter the classroom areas without being checked through the reception area. See the Security section for additional suggestions.

A digital information kiosk in the lobby may provide real-time data on building operations (including information on energy use, water use, and the latest recycling rates) or be used to announce upcoming events and other announcements, such as the location of community events or classes.

Child Find //
Child Find is responsible for identifying students between two and five years old with developmental delays or disabilities. A team of support professionals is necessary to accurately and effectively diagnose children. This team includes:

- One child find specialist
- One speech pathologist
- One psychologist
- One special education coordinator
- One social worker
- Two educational evaluators
- One receptionist/administrative assistant

Office space must be provided for these individuals. Additional support staff may be assigned part time, and hoteling spaces should be provided in the facility

for these individuals. Other staff space needs include staff workrooms with sinks and other standard office support spaces like supply storage and restrooms. Record storage should be included that is appropriately sized for the approximately 320 students screened each year. Records must be maintained for five years. The architect and designers should familiarize themselves with current regulations.

Spaces for parents and children within the Child Find suite include conference rooms, a waiting room, a child playroom, and space for evaluation and screening. The evaluation room has a layout similar to a doctor's office waiting room, with toys and activities for children and parents. One-way mirrors should be located so that observers can look into the evaluation room from both the waiting room and the screening room. The screening room is where Child Find professionals can observe children and note their behavior and interaction with other students.

Child Find should be located near the main office of the Pre-Kindergarten Center but have a separate entrance for visiting families. This entrance should be proximate to visitor parking. As with the main office, a receptionist / administrative assistant should be stationed at a secure entrance controlling access, either directly from the outside if Child Find is on the main level or with the help of a camera if Child Find is on an upper level. The administrative assistant's workspace needs to be in the Child Find suite. See the Security section for further details. Direct, controlled access from the Child Find suite to the Pre-Kindergarten Center space is also needed.

Health Services //
Health Services should be located near the main entrance to the Pre-Kindergarten Center. Health Services is responsible for providing health-related amenities to all students, staff, and Child Find. The space should be organized to provide appropriate space for:

- health screenings
- illness or injury treatment
- meetings and trainings
- prescription medication storage and distribution
- secure records keeping
- private consultations
- rest and recovery units
- a waiting area.

In addition, it is possible that a facility in the future will provide (location-dependent) partnership-operated wellness centers. The centers may offer amenities such as:

- full medical evaluations
- full laboratory services
- dental services
- radiology services
- pharmaceutical services

Cooperative and collaborative wellness centers are desired (location-dependent) and operated through community partnerships.

If the school division elects to provide a school-based health center (SBHC), the architect should work with the division's officials to ensure full space programming requirements are met according to federal regulatory

standards. This center should be adjacent to the PKC clinic, but implementation of a full SBHC will require significant advance coordination by ACPS.

Core Instructional Spaces //
The basic organizational structure of the center should reflect a cluster concept and should consist of general purpose classrooms, commons space for informal instruction, a small group room, two-and three-dimensional display areas, a dining space, and a teacher work center. Each cluster should also contain a resource classroom used by support educators and an extended learning area to facilitate collaborative teaching and learning. Student restrooms should be located within all classrooms with space for a changing table.

Classrooms //
Flexible and easy-to-arrange furniture that is easy to store is preferred. Student arrangements should reflect small collaborative groupings over individual desk arrangements. Classrooms are designed around discovery-based learning centers. 'Teaching and learning' surfaces to include touch screen interactive boards, magnetic white boards and tackable surfaces at student height on as many walls as possible should be provided. Classrooms should be sized so as to include enough space for a student naptime cot for every student. With the exception of some pull-out spaces, all classrooms should be the same size to promote programming flexibility.

Restrooms should be included in all classrooms. Each classroom should include a sink and a water bubbler. Each classroom will be staffed by two professionals, a teacher and a teacher's aide. They will both require stations for their computer. The provision of an itinerant or hoteling space for drop-in or special needs instructors/related service providers is another unique feature that should be included in each classroom.

Extended Learning Areas (ELA) //
ELAs should be incorporated into designs as additional learning areas that occur adjacent to each academic cluster. ELAs are open spaces off the corridor that are meant to facilitate break-out instruction, small group and project-based work in addition to multi-class collaboration and joint teaching initiatives. ELAs vary in size based upon the individual needs of the school and the academic cluster and should be designed and equipped to accommodate a variety of furniture arrangements to optimize flexibility.

Science //
Each classroom should be designed to support science activities such as sand and water stations. Schools should supplement the in-classroom sinks by providing a portable science demonstration cart. Additionally, the provision of an outdoor classroom, a garden area, and/or a food lab should also be considered in order to support early childhood instruction.

Special Education //
Special education facilities should be integrated throughout the center to support the concepts of inclusion and the specialized requirements for the students. Currently more than 70% of all students with disabilities are included in standard learning environments for 80% of each day. For early childhood education, provide at least four resource spaces to support individualized learning

needs (resource), and/or speech therapy, occupational therapy, physical therapy and sensory rooms. Typical occupancy of a pullout space is approximately four to five people. A storage closet is needed for adaptive equipment (ex. standers, walkers, wheelchairs, large balls etc.).

A dedicated, programmatically-sized classroom may be necessary on a location-by-location basis to support city-wide programs and would be identified at the time of individual site planning. Special education facilities should be integrated throughout the school to support the concepts of inclusion and these specialized requirements should be considered for the identified student groups. Special attention should be given to accessibility of all facilities and an integrated learning program.

English Language Learning (ELL) //
Language learning is a key part of early childhood instruction for all students. ELL supports are not currently provided to early childhood students.

Visual and Performing Arts //
ACPS has a strong arts focus for pre-kindergarten students in early childhood. Well-designed spaces need to support a vigorous curriculum and creative presentations. Art and music classrooms should be shared throughout the day by general classes and small group instruction when not occupied by art or music. Art and music are best provided in dedicated spaces that are central to the learning pods of the school. Centrally locating these rooms to provide easy access for students will promote orderly transitions.

Pre-Kindergarten Centers often have an art teacher and a music teacher. These teachers will need functional spaces in which to teach their subjects. The optimal location for an art room is on the ground floor with a northern daylighting orientation. Access to an outside patio or seating area can offer additional workspace, display spaces, and performance spaces. Music rooms should have acoustical treatment to reduce noise with access to a larger performance space outfitted with a small stage, stage lighting, and sound equipment. This performance space should incorporate storage. The performance should be located on one end of a gross motor area or gymnasium and will be used primarily for student performances, talent shows, and full-school announcements.

Library //
The library serves a dual role – its traditional role as a gathering place for reading and learning and a new role as a technological information base and learning hub. In this new role, the library may house a wireless voice/video/data network, which runs throughout the entire building. This network enables the transmission of media services to the desktops of teachers and students without physically entering the library. The new library will utilize digital technology to enhance voice, video, and data communications within the school, among division facilities, and with distant learning resources.

> “Today’s library is a learning place, not a warehouse space. And it must be a fluid environment, one that continually reinvents itself to remain relevant, that adapts to new knowledge of learning and new pedagogy. The concept of the library as a hushed, quiet space, where all students

study individually and silently, sitting up straight on uncomfortable, wooden chairs is a concept that should have long ceased to exist. Students have become accustomed to multimedia environments, working in groups, and multitasking.

Libraries must be spaces where multiple activities can take place simultaneously. And since there are many different learning styles, the library should offer as many different types of environments as possible—quiet study areas, group activity areas, spaces for individual and small group work, spaces for instruction, and spaces where students can listen to music.… ”

Rolf Erikson, DesignShare interview Nov 2006

The library in an Early Childhood Education Center should have age-appropriate furniture and design features, similar to those of the children’s section at Barnes & Noble. The space will be used for teaching, and presentations such as puppet shows. The library should include space for group story time, small group resources, and individual learning. The space should feel cozy and have a home-like atmosphere, without being cavernous.

Physical Education //
To support the early childhood physical education program, indoor and outdoor gross motor areas are required. Outdoor physical education teaching areas should be located near the indoor gymnasium. Physical education facilities should be designed with the possibility for community use during non-school hours.

An indoor gross motor area is very important to the early childhood curriculum. A voluminous space that is large enough to host indoor recess, which is free of columns or obstacles, is appropriate for this need. The gross motor area will be used for student assessment, indoor recess, and activity play. Flexibility of space use is desired but this area should not be a full size gymnasium. A storage closet to house tricycles, balls, hula hoops, walking beams, and other materials is needed. A stage can be co-located in this area, but when a performance space is provided as part of this area, storage for portable seating is needed. Designers should provide the ability to separate this space from the rest of the center for use after school hours.

Dining and Food Nutrition **S**ervices //
Due to the age of the students in the pre-kindergarten center, minimizing transitions out of the classroom is optimal. Students will eat in their classrooms and staff will deliver food from the kitchen to the classroom. Teachers will work with ACPS Facilities staff to ensure that classrooms cleanliness is maintained.

The dining experience for students will reflect a family style meal, served by staff to the students. Students will be arranged at tables in sets of eight to 10 with at least one adult at each table. Site coordination between administration and School Nutrition Services (SNS) is required to ensure an efficient and smooth lunch experience for students.

SNS is responsible for food preparation division wide. SNS facilities should incorporate space for speed scratch and / or speed cooking and warming

kitchens with the appropriate equipment. Facilities must include space for frozen storage, cold storage, dry storage, manager and assistant manager offices, a dedicated loading dock, and pot washing equipment. The architect should coordinate with the director of SNS during the design development phase to ensure current needs are met.

Site //
Site circulation should be organized for safety and efficiency. This should be accomplished through careful separation of vehicular traffic, including the separation of school buses, parents, and staff. Particular consideration should be given to providing safe passage to pedestrian traffic. Sufficient stacking space should be provided to prevent congestion of busy streets.

All play areas should be protected from vehicular and pedestrian traffic, so students can be assured of a safe and secure environment on the entire school site. Adult safety gates are imperative so students cannot enter or exit without an adult. Shading elements should be considered, along with an outdoor learning area and garden. Outdoor storage unit, for tricycles, water and sand toys, gardening tools, balls, and other gross motor equipment is needed.

The Virginia Department of Education Guidelines recommend that each school site "have areas that can be developed to provide the minimum number of play areas required for physical education;" as indicated by Figure 3.3.

Alexandria school sites are urban in nature and most current and future sites cannot accommodate the recommendations outlined in the Guidelines for School Facilities in Virginia's Public School. It is recommended that architects work with ACPS and RPCA to prioritize types of outdoor space development on a site-specific occasion. Architects should endeavor to design new schools or future renovation in a way that will maximize available open space.

Site Management //
Recreation, Parks, and Cultural Activities (RPCA) is a partnership program that utilizes shared ACPS facilities for afterschool programming. RPCA operates the majority of playing fields, courts, parks, and playgrounds adjacent to Alexandria schools. When funds are available to enhance the campus or grounds of the school, architects should coordinate and consider

FIG. 3.3 // **PLAY AREAS**

SPACE	QUANTITY
Multiuse (Hard Surface)*	(2) 100' x 120'
Fitness Development Fenced Equipment Area (PK-1)	(1) 100' x 120'
Fitness Development Fenced Equipment Area (2-5)	(1) 100' x 120'
Multiuse Field Play Area	(2) 180' x 140'

**A gymnasium may substitute for one multiuse (hard surface) play area.*
NOTE: Quantities are based on 400 student prototype.

RPCA's requirements toward playgrounds, courts, fields, and gymnasium spaces, per the joint ACPS/RPCA Facility & Outdoor Maintenance & Use Agreement.

Parking and Transportation //
ACPS transportation provides services to 5,800 students daily. At school facilities where space can be provided for school bus parking, it is desirable to orient busses in the parking lot to prevent them from reversing out of a parking spaces – in a manner similar to that seen in a bus depot parking area. If a bus parking loop must be utilized, avoid parallel, double-wide parking during loading and unloading, as this increases danger to the students.

It is important to note that most ACPS schools are located in densely-populated neighborhoods and many students either walk to school or receive rides from parents. At the elementary level, current ACPS policy is to only provide transportation for students living more than one mile from their designated school site. The Pre-Kindergarten Center will offer transportation to all students. Due to the high percentage of students arriving by alternate means, designers should be careful to separate parking lots and school bus loading areas from each other and from student drop-off areas and pedestrian walk ways (see Figure 3.4). Furthermore, the use of bicycles should be encouraged by providing bike racks in quantities at a minimum consistent with LEED guidelines.

The following chart (Figure 3.5) recommends the minimum parking requirements based upon proposed capacity prototype. Actual parking requirements may be impacted by factors such as zoning, site constraints, absences or presence of other modes of transportation, etc. The architect must coordinate at time of design and it should be noted that ACPS offers incentives to encourage carpooling and the use of mass transit by staff.

Due to the increased amount of staff required for pre-kindergarten age students, ACPS should consider parking exceeding city code requirements for an elementary school at the time of development of the pre-kindergarten center.

FIG. 3.4 // **BUS DIAGRAM**

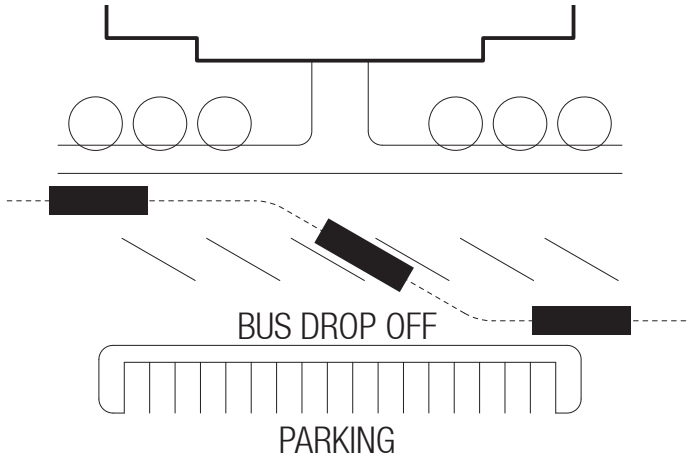


FIG. 3.5 // **PARKING CAPACITY**

DESCRIPTION	CAPACITY PROTOTYPE
Building Capacity	360
Teaching Stations	20
Staff Parking	
Teachers	40
Ancillary Staff	9
Administration	5
Custodial / Maintainence	3
Food Service	4
Total Staff Parking	**61**
Total Visitor Parking	**9**
Alexandria Code Requirement	**1 space / 25 seats**

NOTE 1
Ancillary staff includes teaching aides, media center specialist, special education staff, etc. The total is calculated as percentage of the student population as follows: Elementary: 2%.
NOTE 2
Administration includes principals, secretarial, itinerant staff. Calculation at 1%
NOTE 3
Custodial/maintenance staff includes full-time staff for regular school hours. Calculation: one staff per 150 students.
NOTE 4
Food service staff is calculated at one staff per 100 meals served with 80% building capacity participation for a full-service kitchen.
NOTE 5
Visitor parking is calculated at 2% of building student capacity.

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conceptual building organization

Careful and thoughtful consideration of building organization during design is critical to the success of a future school program. The Academic Cluster concept best meets the needs of the educational programs, students, and staff. The cluster concept facilitates a variety of instructional strategies and it provides a learning environment that is characterized by flexibility, a sense of community for the students and teachers, and a safe, well-supervised environment. The clusters will foster family-like learning communities that enhance student collaboration. The space will provide small group and blended learning areas that integrate technology into the core curriculum. The clusters will incorporate smaller personalized spaces within the larger whole that allow students to personalize their learning atmosphere. Teachers should have the option and flexibility within a cluster to create and organize learning environments that work for students and their learning styles.

Academic areas are located in the quiet areas of the building that can be isolated during the off hours. Noisier areas are grouped near the parking and public areas and allow for after-hours access. Figure 4.0 shows a relationship model based on the cluster concept.

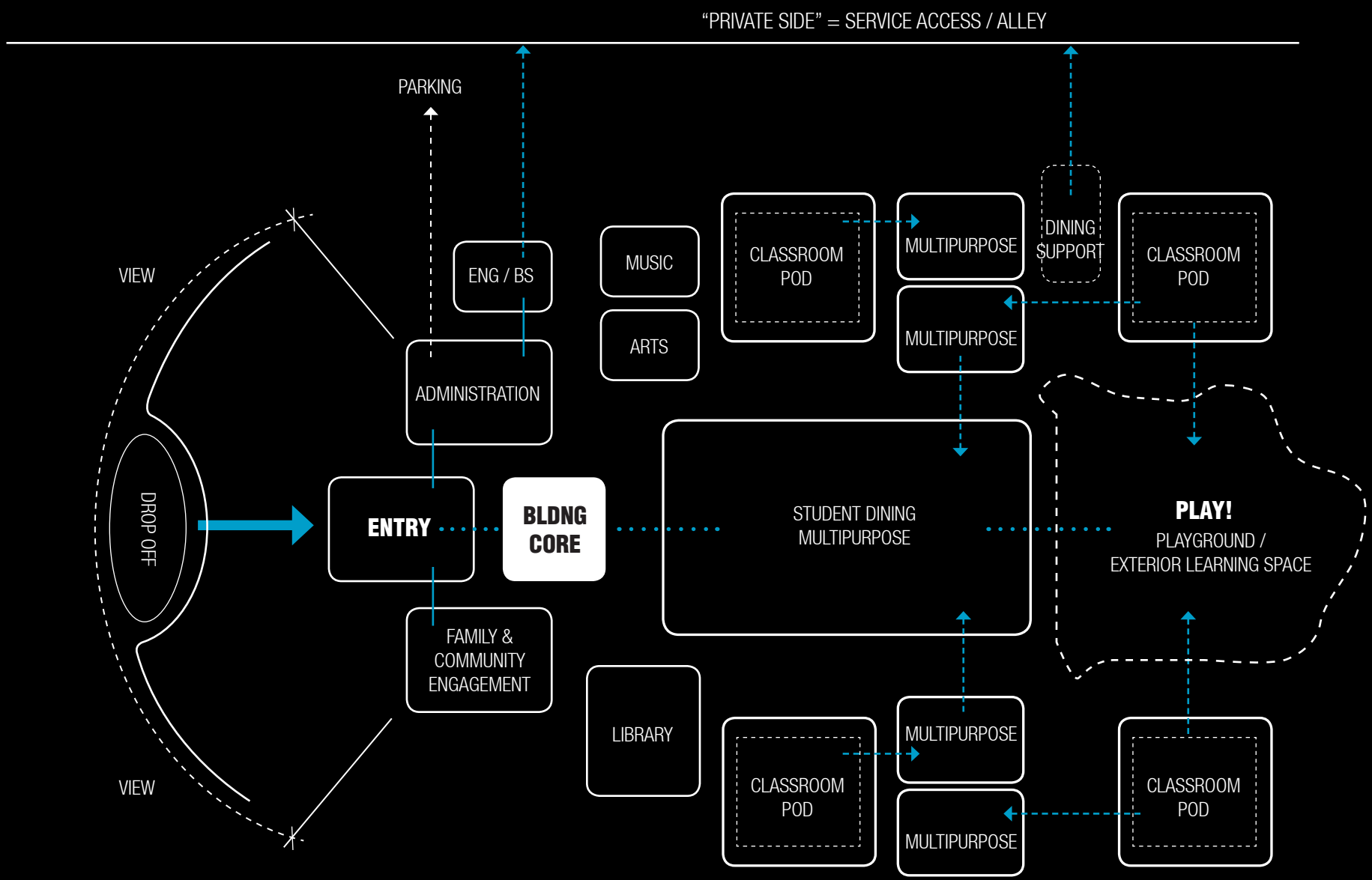


FIG. 4.0 /// **ADJACENCY DIAGRAM**

DESIGN PRINCIPLES ///

overview

The following section provides executive summaries of the guiding design principles that should be applied to each space within an ACPS school facility. The appendix of this document includes expanded detailed guidance for some of the categories discussed here.

Furniture and Equipment //
Classrooms vary in shape and size. Therefore, the furniture should be flexible to accommodate a variety of classroom formats for both individual and group activities. Teachers and students should have storage space for personal belongings, papers, books, supplies, and teaching materials. Teachers should also have access to a community storage room to exchange and share materials in large plastic containers labeled by unit theme.

To the extent possible, movable furnishings should be used, rather than fixed casework, to provide flexibility for future reconfiguration. Furniture should be selected for its ergonomic traits. Consideration should be given to variability and adjustability to support diverse learning styles.

Technology //
The facility should contain the latest in technology, and infrastructure should be provided to support wireless access to data and video throughout the building. It is intended that access to technology will be seamless and pervasive throughout the building with only the minimal number of hard drops needed to support voice, teaching stations, and wall-mounted devices. Technology infrastructure should support the concept that learning can happen anywhere by enabling a one-to-one student-to-device ratio. The specific tools and design guidance will be determined based on the best practices at the time of construction.

Every learning area should be wired for teacher audio enhancement. Research into this cutting-edge technology suggests that student learning can improve in classrooms where the teacher's voice is amplified and the classroom acoustics are designed to support voice clarity. Please reference Appendix 2 for additional guidance regarding technology infrastructure requirements.

Universal Design //
The entire facility should be accessible for students, staff, and visitors. This should be accomplished through judicious use of ramping and elevators with sufficient internal clearances for circulation, convenient bus/van loading and unloading, and nearby handicapped parking spaces. All elements of the Americans with Disabilities Act must be complied with, including way-finding and signage, appropriate use of textures, and universal accessibility of all indoor and outdoor school facilities.

Safety and Security //
ACPS wants to maintain a warm and inviting environment, while simultaneously ensuring the safety of students, staff, and community. The organization of a building will have a major impact on student behavior and safety concerns. Architects should refer to Crime Prevention Thru Environmental Design (CPTED).

All school locations should include a double perimeter approach where every visitor is guided through a secure exterior door into a secure holding vestibule prior to gaining access to the main office. Visual access from the

main office to the exterior vestibule is mandatory and every entrance to the school should have a CCTV IP camera. Consult with ACPS on the most current keying policy.

Family and Community Engagement Centers //
ACPS serves a diverse community of families who have immigrated to the DC metropolitan area from all over the world. It is understandable that for cultural reasons or due to language barriers newcomers to the school may be hesitant to engage staff and need additional support. The Division wants to establish Family and Community Education Centers (FACE) at each school to welcome families and provide the additional resources to help them succeed.

A typical FACE center would ideally be located near the main office and include:

- a reception area with both comfortable seating for individual conversations and table seating for meetings and classes
- private office
- storage

The inclusion of a FACE center will be decided when the site- specific educational specification and program are developed.

Parent Teacher Associations //
Provide flexible use space to accommodate the mission and program offerings of the PTA group should be provided. PTAs meet on a monthly schedule, typically during the evening, and have 30 to 35 participants in attendance. PTA meetings including school board members, parents, and- on occasion the superintendent. PTAs offer volunteer after-school programs that require access to standard, flexible classrooms, the gymnasium, the library, and the cafeteria. Consider co-locating the PTA with other partnership functions like the FACE center. PTA functions require dedicated storage space and direct interaction with the school's main office suite and staff.

Energy and Environmental Performace //
ACPS is dedicated to renovating existing, or building new, facilities that meet or exceed Eco-City standards and City of Alexandria environmental performance standards. ACPS desires to offer schools that teach faculty, staff, students, and the community the importance of environmental stewardship. ACPS believes quality architecture and high energy performance facilities positively impact the education of students and increase retention of staff and students. At this time, city development standards require compliance with LEED Silver certification standards for major construction projects. ACPS seeks to exceed these minimum standards.

Materials and Finishes //
ACPS believes high quality architectural materials and finishes create an atmosphere that supports and inspires learning. All spaces should be conducive to teaching, provide a warm and welcoming feeling and meet the principles of Evidence-Based Design (lighting, environmental / air quality, and acoustics). All materials must be highly durable and resilient yet support a creative learning environment. ACPS is cognizant that materials

should be reasonable in cost and not exorbitant when considering budget and life-cycle costs to maintain and upkeep. A sensible balance is necessary to maintain budget and achieve ACPS' facility standards.

Operations and Mechanical //
Mechanical systems that are climate-appropriate and responsive to the life cycle, maintenance, and efficiency expectations of ACPS should be provided. Passive systems that pair with active systems should be provided and coordinated to achieve maximum efficiencies while coordinating with the users to determine the location of universal and dedicated systems. ACPS requires individual facilities to operate under 20 kw/hr per square foot by the year 2026.

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the 360 student prototype

The remainder of this document is meant to be illustrative of a typical 360 student Pre-Kindergarten Center in the Alexandria City Public Schools. The basis for the capacity and the number of classrooms per grade was previously described on page 17. The number and size of support spaces and labs are driven by staffing formulas and national benchmarks. For new schools or the modernization/ addition to an existing school, this information would inform a 'site-specific' educational specification.

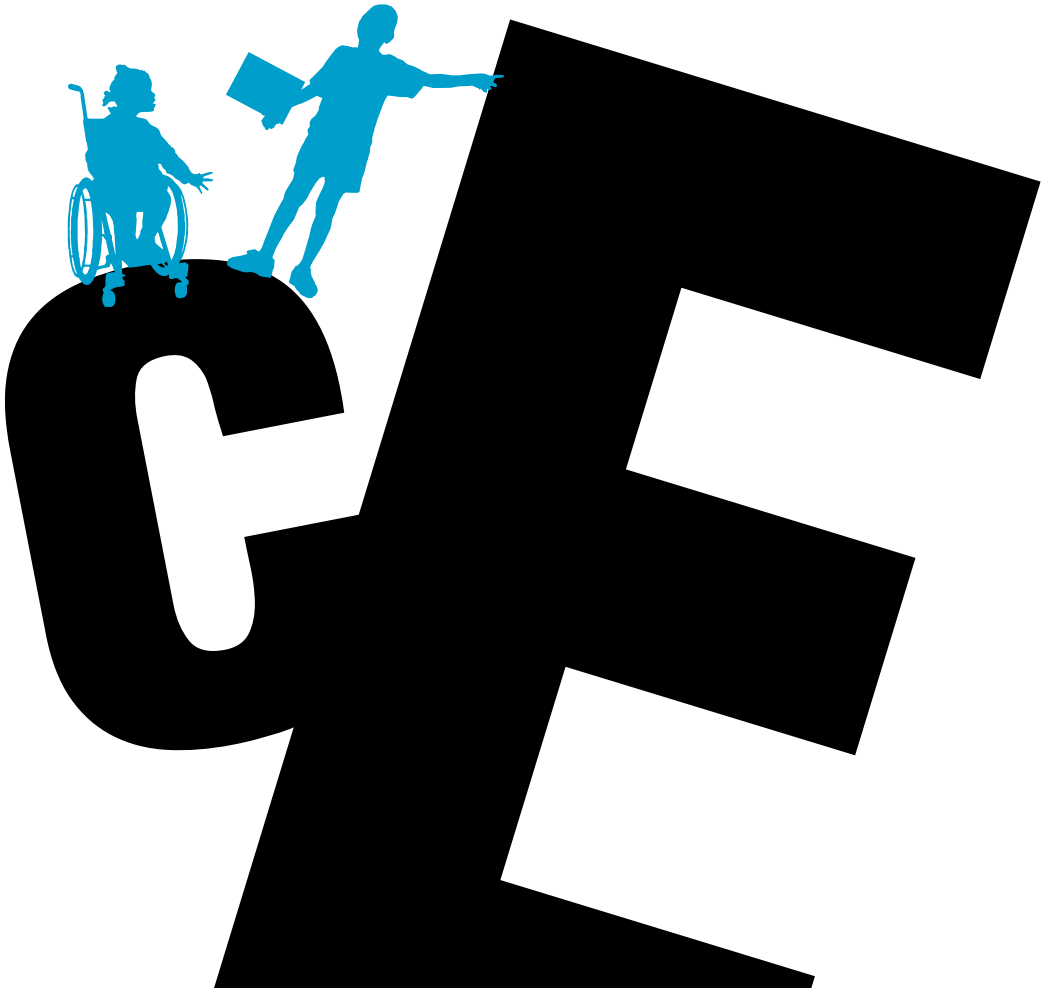
It is assumed that architects should be required to bring an existing school up to new school standards within reasonable limits. Designs for spaces may vary from recommended sizing by +/- 10% to minimize the unnecessary movement of walls or preserve the integrity of an historic building.

The net square foot requirements include the classrooms, support spaces, and large core areas. The net/gross calculation includes corridors, bathrooms, mechanical spaces, etc. The proposed ratio listed in this specification assumes a new, highly-efficient school. It is expected that existing schools will be less efficient and the actual final (wall-to-wall) building will be larger than what is listed.



FIG. 5.0 // **BUILDING SPACE SUMMARY**


SPA





PKC-ACA /// **CORE ACADEMIC**

SHARED CLASSROOM TOILET
SHARED CLASSROOM STORAGE
SHARED STUDENT PROJECT STORAGE
RESOURCE CLASSROOM
SENSORY CLASSROOM
WORKROOM/TEACHER OFFICE
STAFF LOUNGE
PRE-KINDERGARTEN CLASSROOM
MULTIPURPOSE/ELA

SPACE	QUANTITY	SF	TOTAL	NOTES
CORE ACADEMIC				
Outdoor Area (when available)	1	--	--	
Shared Classroom Toilet	12	50	600	
Shared Classroom Storage	12	100	1,200	
Shared Student Project Storage	4	150	600	
Resource Classroom	3	260	750	
Sensory Classroom	1	250	250	
Workroom/Teacher Office	2	300	600	
Staff Lounge	1	300	300	
Pre-Kindergarten Classroom	20	1,000	20,000	capacity driving space
Multipurpose/ELA	2	800	1,600	
Total			**25,900**	

Comments //

During facility renovations, the architect should be expected to minimize the movement of 'hard' walls and fit the proposed programmed spaces into the existing building. Tolerances of +/- 10% are acceptable as is the combination of spaces within a suite. Adjacencies as specified are desirable, but options may be considered and should be reviewed with the planning team.

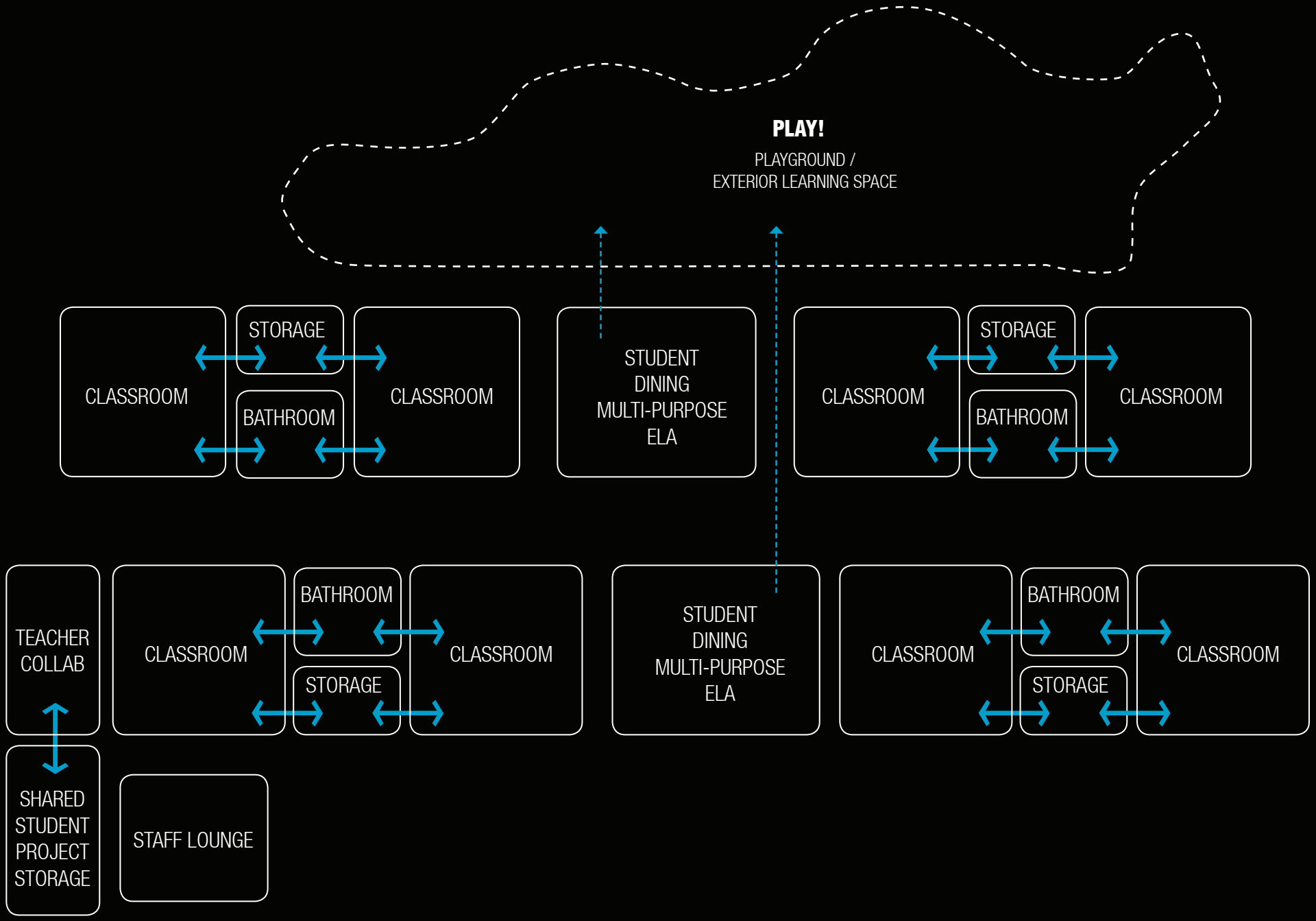
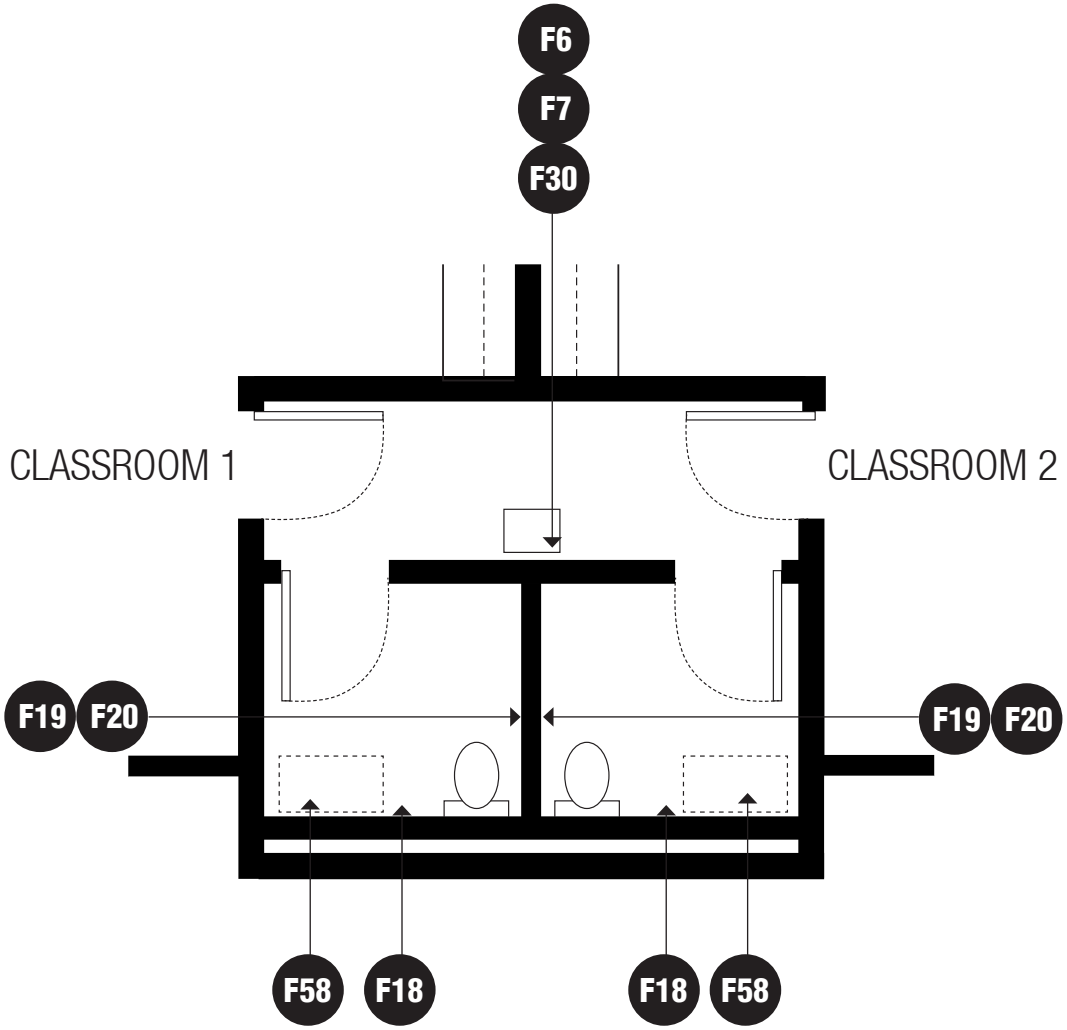


FIG. 6.0 // **CORE ACADEMIC ADJACENCY DIAGRAM**



size
50 SF

capacity
2 students

ancillary spaces
1-5 classrooms

spatial relationships
shared by two adjacent classrooms

plumbing
sink connection
toilet connection

LEGEND ///

● **fixed equipment**

F6 soap dispenser

F7 towel dispenser

F18 mirror

F19 toilet tissue holder

F20 bathroom accessories

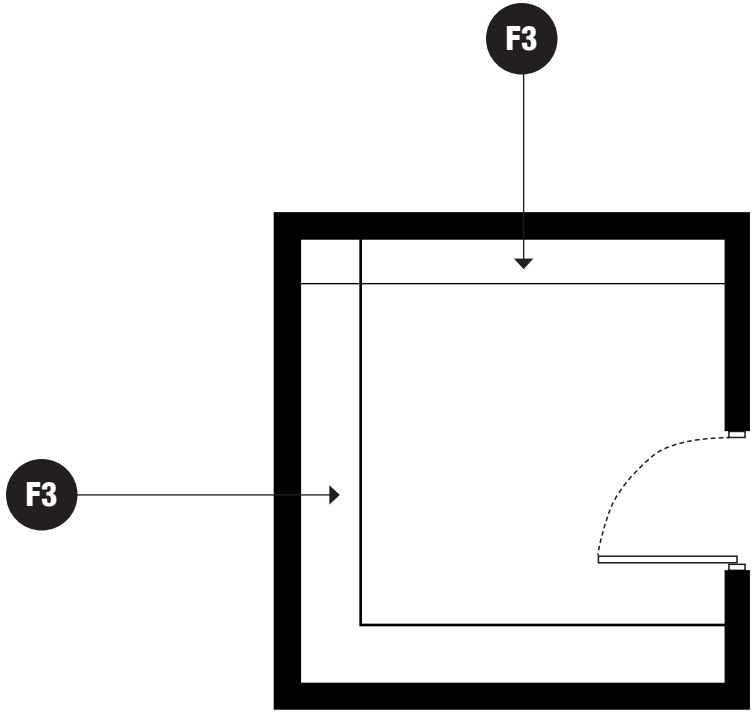
F30 bathroom sink

F58 changing table



PKC-ACA /// **CLASSROOM BATHROOM**

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PKC-ACA /// SHARED CLASSROOM STORAGE

size
100 SF
capacity
n/a
ancillary spaces
computer storage
spatial relationships
adjacent and access to technology storage
program activities
materials storage
environmental considerations
uniform lighting
security of door
finishes
flooring:
resilient tile flooring
base:
resilient base
ceiling:
exposed structure
walls:
painted concrete masonry units
fire suppression
fire supression system
HVAC
supply/return air system

electrical
single level switching
fluorescent lighting
duplex receptacles
electronic safety and security
life safety devices per code

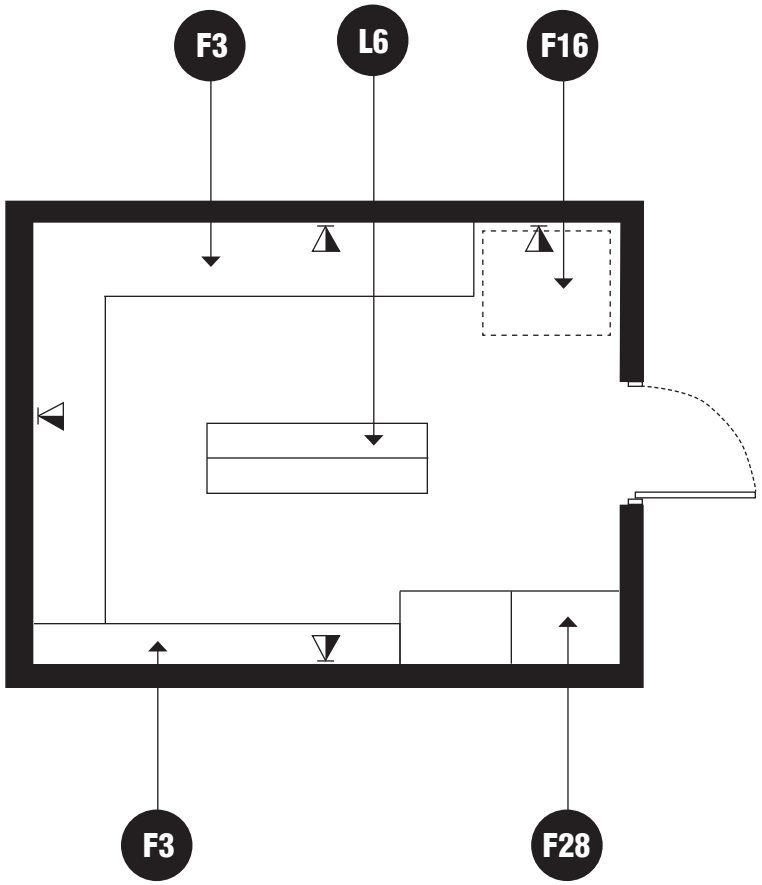
LEGEND ///

● **fixed equipment**

F3 wall shelving (12” and 18” deep)

NOTES //

1. Finishes/features: refer to _____ for specification references.
2. Loose furnishings and features shown represent one of many possible solutions.





PKC-ACA /// SHARED STUDENT PROJECT STORAGE

size

150 SF

capacity

staff members

ancillary spaces

n/a

spatial relationships

one per floor

centrally located to the academic pods with easy access for teachers

program activities

storing and retrieving books/supplies

plumbing

washer connection

general information

When able, ACPS will provide space for a laundry facility or incorporate into an existing space when necessary. Laundry facilities should be easily accessible from the classrooms. If a multiple-story model is pursued, ACPS will consider the inclusion of a laundry facility on each floor.

LEGEND ///

● **fixed equipment**

F3 wall shelving (12” and 24” deep)

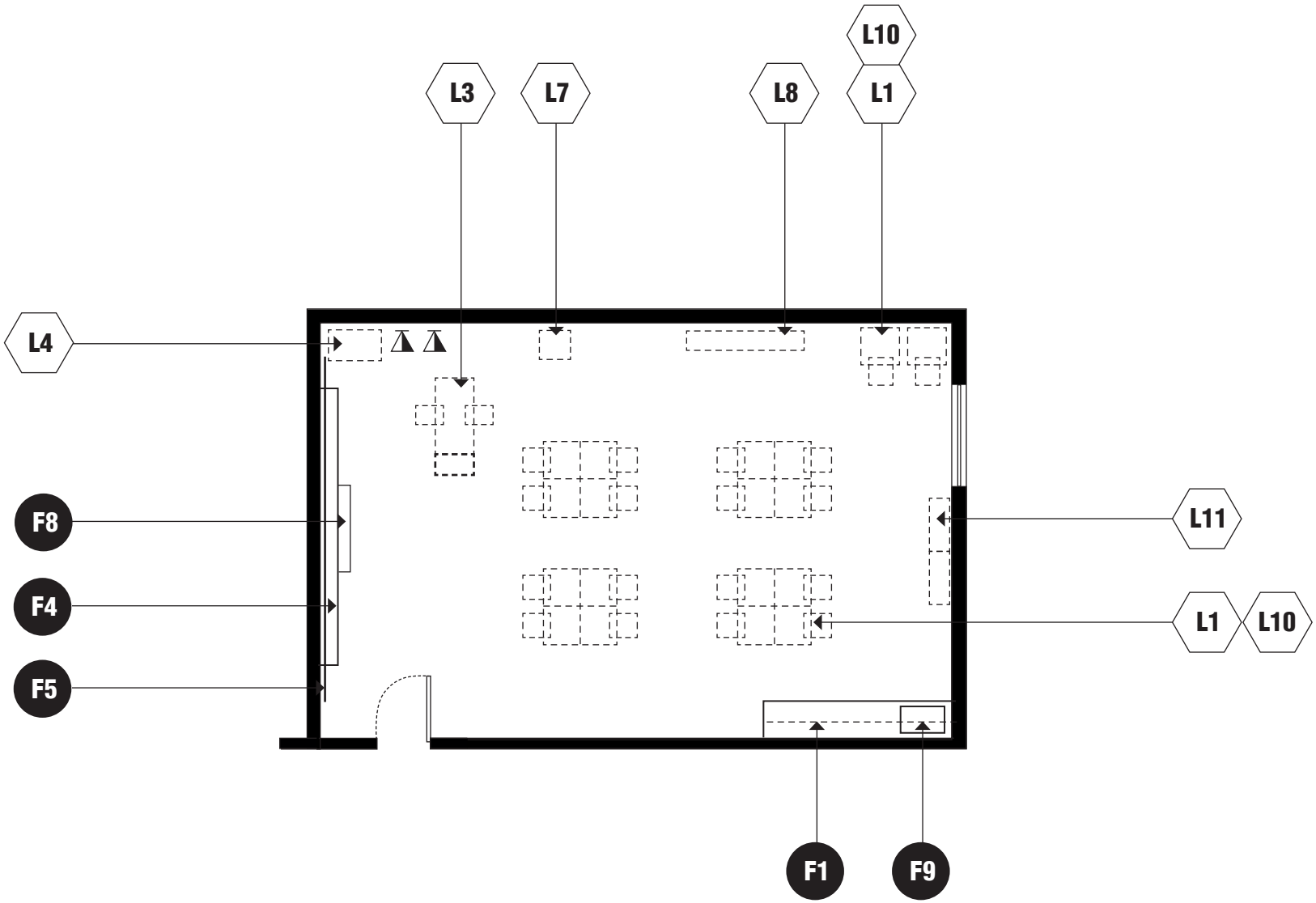
F16 stacked washer/dyer

F28 base cabinets

⬡ **loose furnishings**

L6 mobile shelving

data drop



PKC-ACA /// **RESOURCE CLASSROOM**



size

250 SF

capacity

up to 15 students

2 or more staff members

ancillary spaces

n/a

spatial relationships

located within academic core areas

program activities

small group work

independant instruction and work

reading, math, speech, etc.

LEGEND ///

● **fixed equipment**

F1 base/wall cabinets and shelving

F3 wall shelving (over cubbies)

F4 marker board (8 LF)

F5 tackable/magnet wall surface

F8 wall mounted interactive electronic presentation device

F9 classroom sink

⬡ **loose furnishings**

L1 stackable/nesting chairs (15-18)

L3 teacher work surface with mobile storage and two chairs

L4 four drawer lateral file cabinet

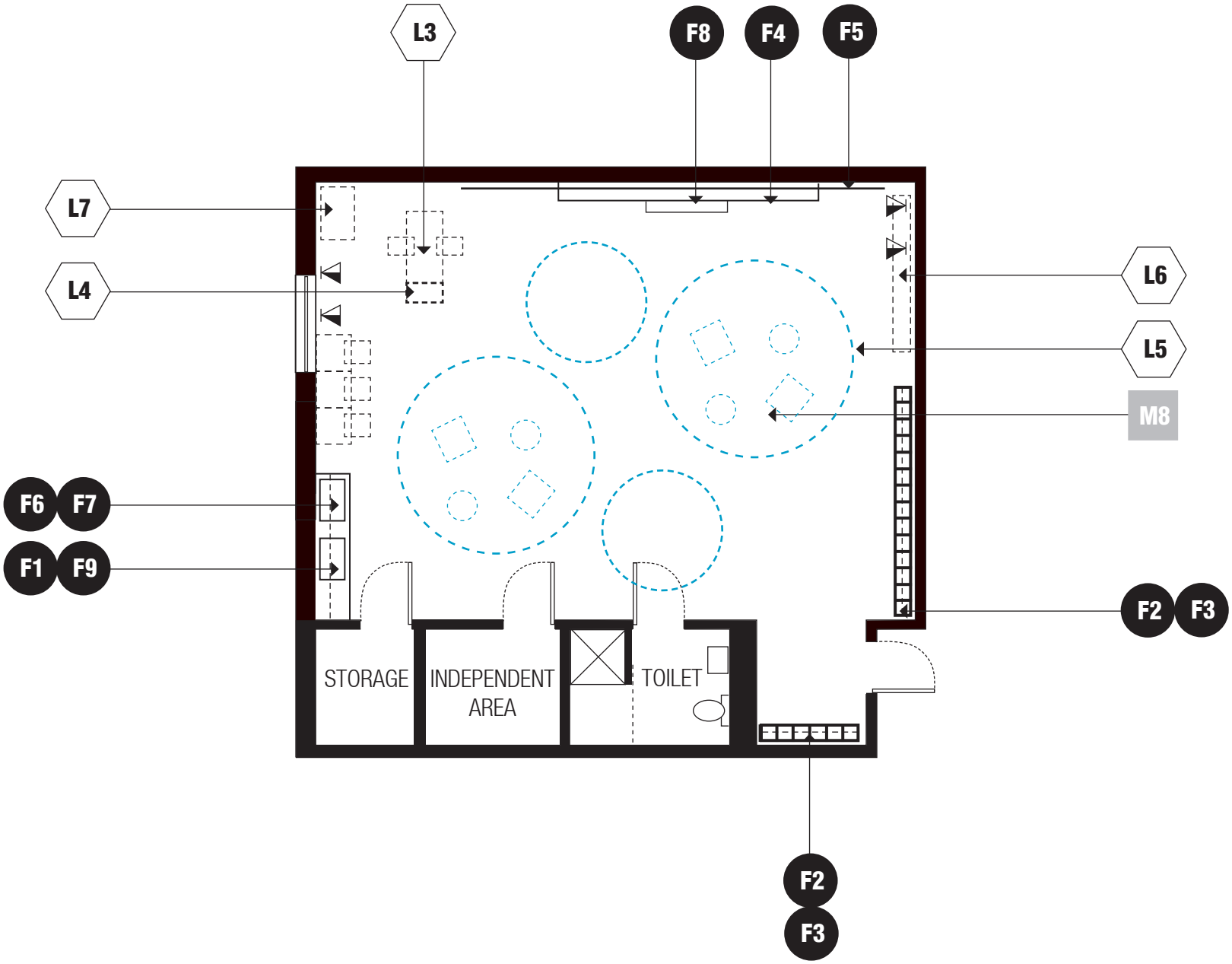
L7 teacher's lockable wardrobe (18"X18")

L8 tall cabinet with shelves

L10 student desks (15-18)

L11 adjustable height bookshelves

data drop



PKC-ACA /// **SENSORY CLASSROOM**



size

250 SF

capacity

10-12 students

2 or more staff members

ancillary spaces

classroom toilet

storage closet

independent area

spatial relationships

elevator access

toilet access

ground floor, accessible

paired in groups of two

near the nursing suite

located within academic core

program activities

small group work

independent work

individual instruction

support for city wide programs such as autism and multiple disability

plumbing

sink with drinking fountain

plumbing connections

wall-mounted water closet

wall-mounted lavatory

ADA shower controls and head

Floor drain

LEGEND ///

● **fixed equipment**

F1 base/wall cabinets and shelving

F2 student cubbies (20)

F3 wall shelving (over cubbies)

F4 marker board (8 LF)

F5 tackable/magnet wall surface

F6 soap dispenser

F7 towel dispenser

F8 wall mounted interactive electronic presentation device

F9 classroom sink

⬡ **loose furnishings**

L3 teacher work surface with mobile storage and two chairs

L4 four drawer lateral file cabinet

L5 bound rugs

L6 mobile shelving (various)

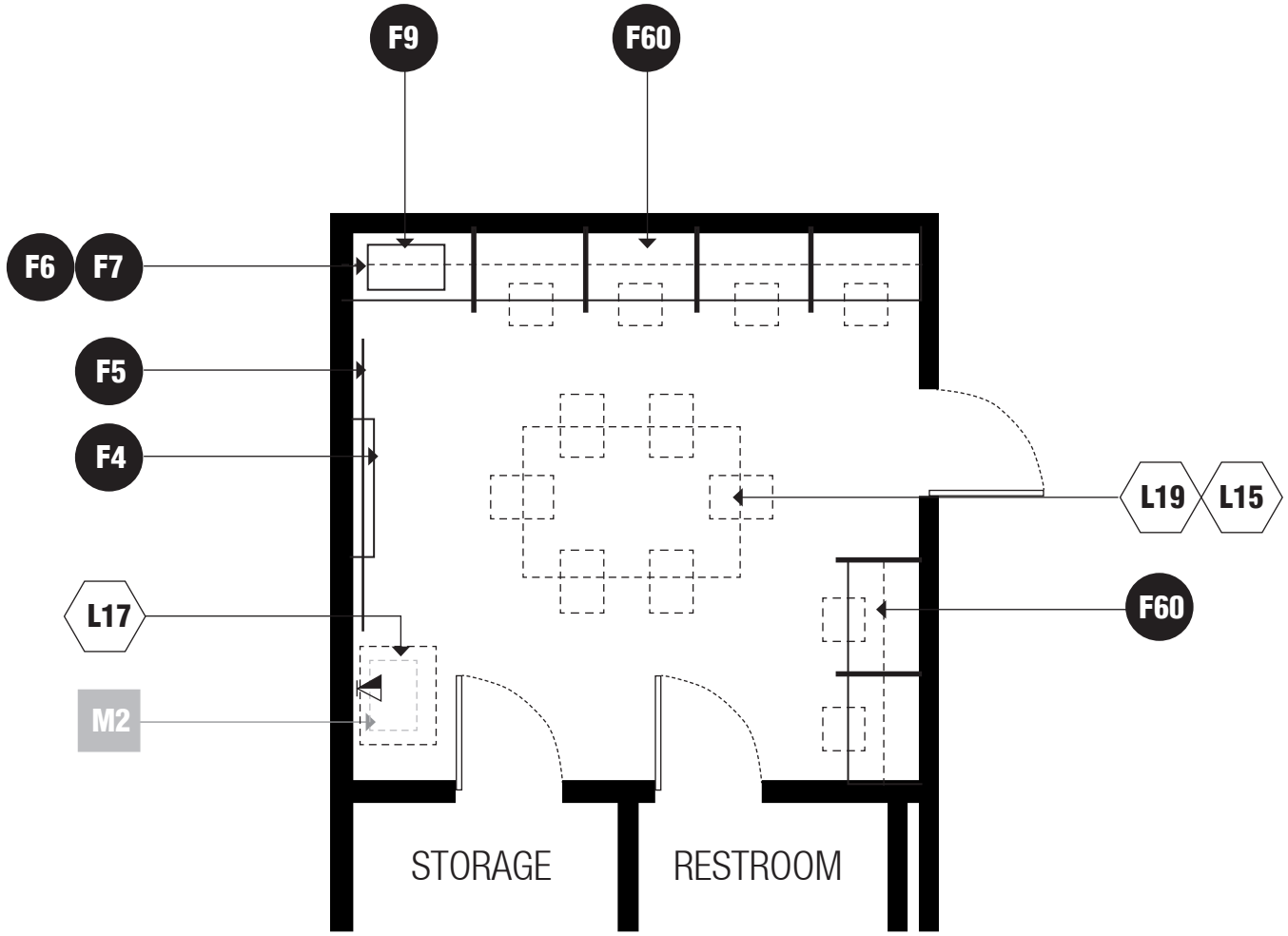
L7 teacher's lockable wardrobe (18"X18")

L8 tall cabinet with shelves

■ **miscellaneous**

M8 childs play area

data drop





PKC-ACA /// **WORKROOM/TEACHER OFFICE**

size

300 SF

capacity

teachers

teachers' assitants

parents/volunteers

ancillary spaces

staff restroom

storage

spatial relationships

near academic core classrooms

access to staff restroom(s) from within

access to storage from within

program activities

team staff meetings

lesson planning and grading

scheduling appointments

record keeping

develop and review teacher materials

plumbing

sink connection

LEGEND ///

fixed equipment

F4 marker board

F5 tackable/magnet wall surface

F6 soap dispenser

F7 towel dispenser

F9 classroom sink

F57 kitchenette

F60 itinerant hotel spaces

loose furnishings

L15 task chair (6)

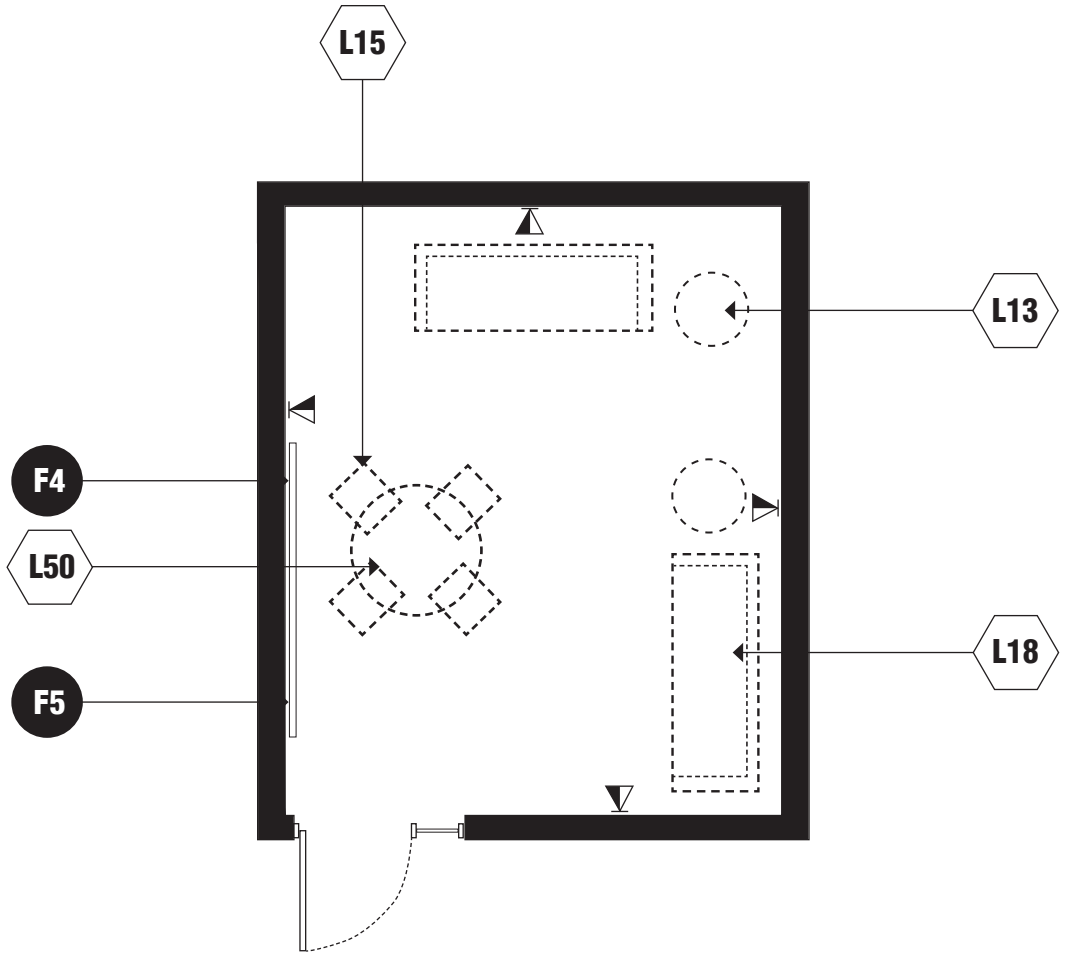
L17 printer station

L19 conference table

miscellaneous

M2 color printer

data drop





PKC-ACA /// **STAFF LOUNGE**

size

300 SF

capacity

staff

7-10 teachers

ancillary spaces

n/a

spatial relationships

near teacher office/workroom

program activities

staff gathering

LEGEND ///

● **fixed equipment**

F4 marker board (8 LF)

F5 tackable/magnet wall surface (8LF)

⬡ **loose furnishings**

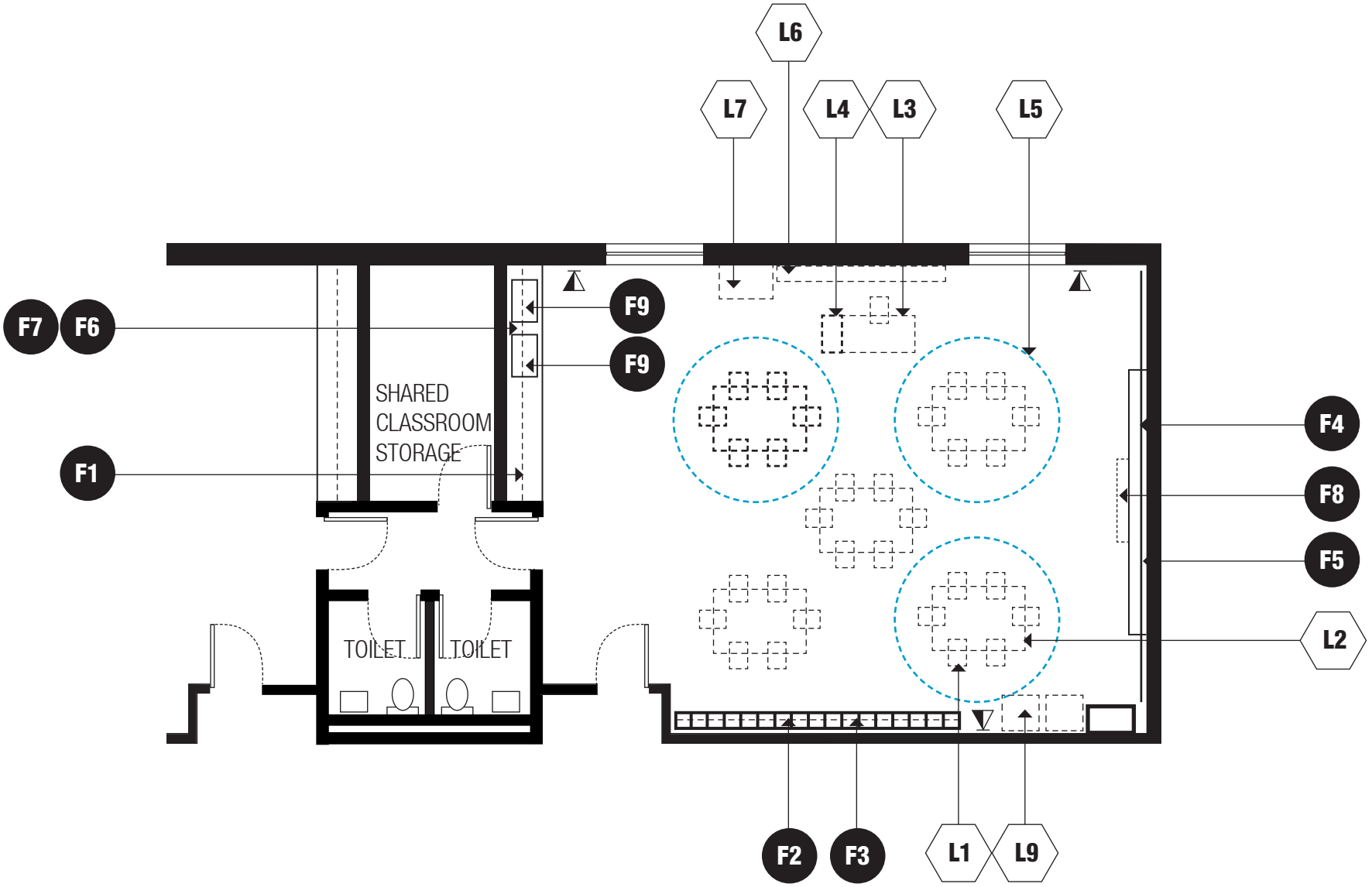
L13 small table

L15 task chair (4-6)

L18 lounge chair and/or couch

L50 small conference table

⚑ data drop



PKC-ACA /// **PKC CLASSROOM**



size

1,000 SF

capacity

16-20 students

2 or more staff members

ancillary spaces

classroom toilet

storage closet

spatial relationships

located within academic core areas

locate coat cubbies near door

locate at first floor for emergency

prefer door to outside from classroom

program activities

small group work

whole group work

teacher directed

one on one instruction

cooperative learning

discovery

language arts

inquiry

plumbing

double sink at two heights

with drinking fountain and sink at child height

with deep well at adult height

wall mounted watercloset

wall mounted lavatory

LEGEND ///

● **fixed equipment**

F1 base/wall cabinets and shelving

F2 student cubbies (20)

F3 wall shelving (over cubbies)

F4 marker board (8 LF)

F5 tackable/magnet wall surface

F6 soap dispenser

F7 towel dispenser

F8 wall mounted interactive electronic presentation device

F9 classroom sink

⬡ **loose furnishings**

L1 stackable/nesting chairs (18-20)

L2 tables (4-5)

L3 teacher work surface with mobile storage and two chairs

L4 four drawer lateral file cabinet

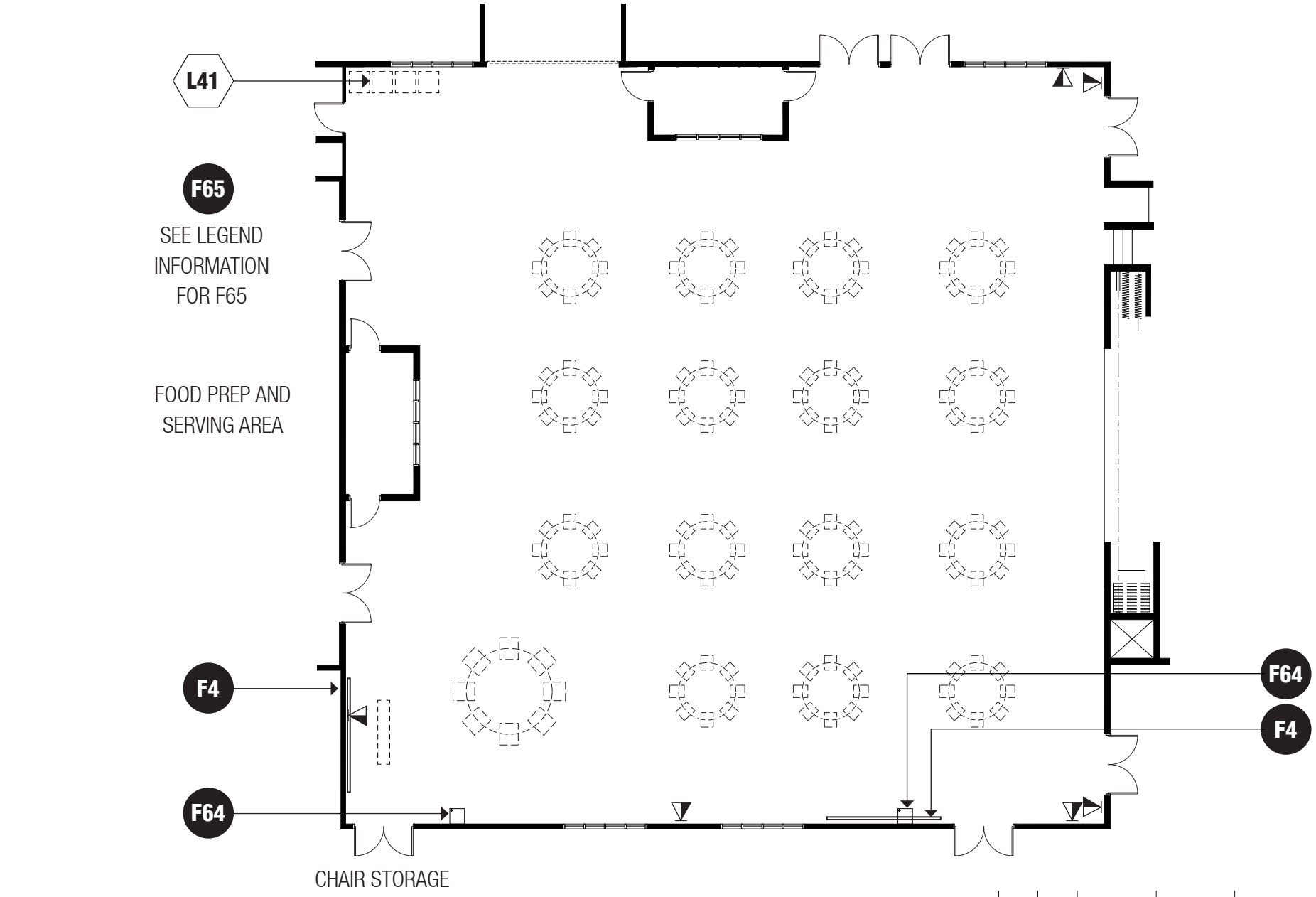
L5 bound rugs (3)

L6 mobile shelving (various)

L7 teacher's lockable wardrobe (18"X18")

L9 learning center sets (sand/water table, kitchen, art cart, etc.)

data drop



PKC-SD /// **MULTIPURPOSE / ELA**

size

800 SF

capacity

18-24 students

configuration

consider a flexible wall between the two multipurpose/ela spaces that allows the space to open into one large multipurpose/ela space

ancillary spaces

stage (optional)

spatial relationships

centrally located to office area, classrooms, and media center

near parking and entry to building

near food lab classroom (consider overhead rolling door)

program activities

school and community programs

meetings and activities

environmental considerations

electrical outlets for student use

provide a sound system

provide large motorized projection screen with ceiling mounted projector

configure larger spaces to manage sound and for multiple users

higher than normal ceiling height

if feasible, provide patio for outside seating options

cleanable building surfaces

windows to provide ample natural light

good sight lines to all areas of the room for supervision

window treatment to darken room for AV presentation; this is required if the stage is located in this area

LEGEND ///

● **fixed equipment**

F4 marker board (on two walls - 16 LF each with electric outlet below)

F64 filtered water fountain w/ bubbler and goose neck bottle filler

F65 recycling center (work with food service staff on location and design)

⬡ **loose furnishings**

L41 chair dollies

data drop

NOTES //

1. Provide age-appropriate furniture with tables and chairs of various heights.
2. Horseshoe or oblong tables with clear sightlines to the adult are preferable.

PKC-MC /// **LIBRARY**

READING / LEARNING / CIRCULATION
COMBINED OFFICE/WORKROOM
DEVICE-CHARGING ROOM
STORAGE
SMALL GROUP ROOM

SPACE	QUANTITY	SF	TOTAL	NOTES
MEDIA CENTER				
Reading/Learning/Circulation	1	1,600	1,600	
Combined Office/Workroom	1	200	200	
Device-Charging Room	1	100	100	
Storage	1	150	150	
Small Group Room	1	150	150	
Total			**2,200**	

Comments //

Spaces within the Media Center may vary up to 15% and may be combined to facilitate circulation and supervision. The overall square footage may be +/- 10%.

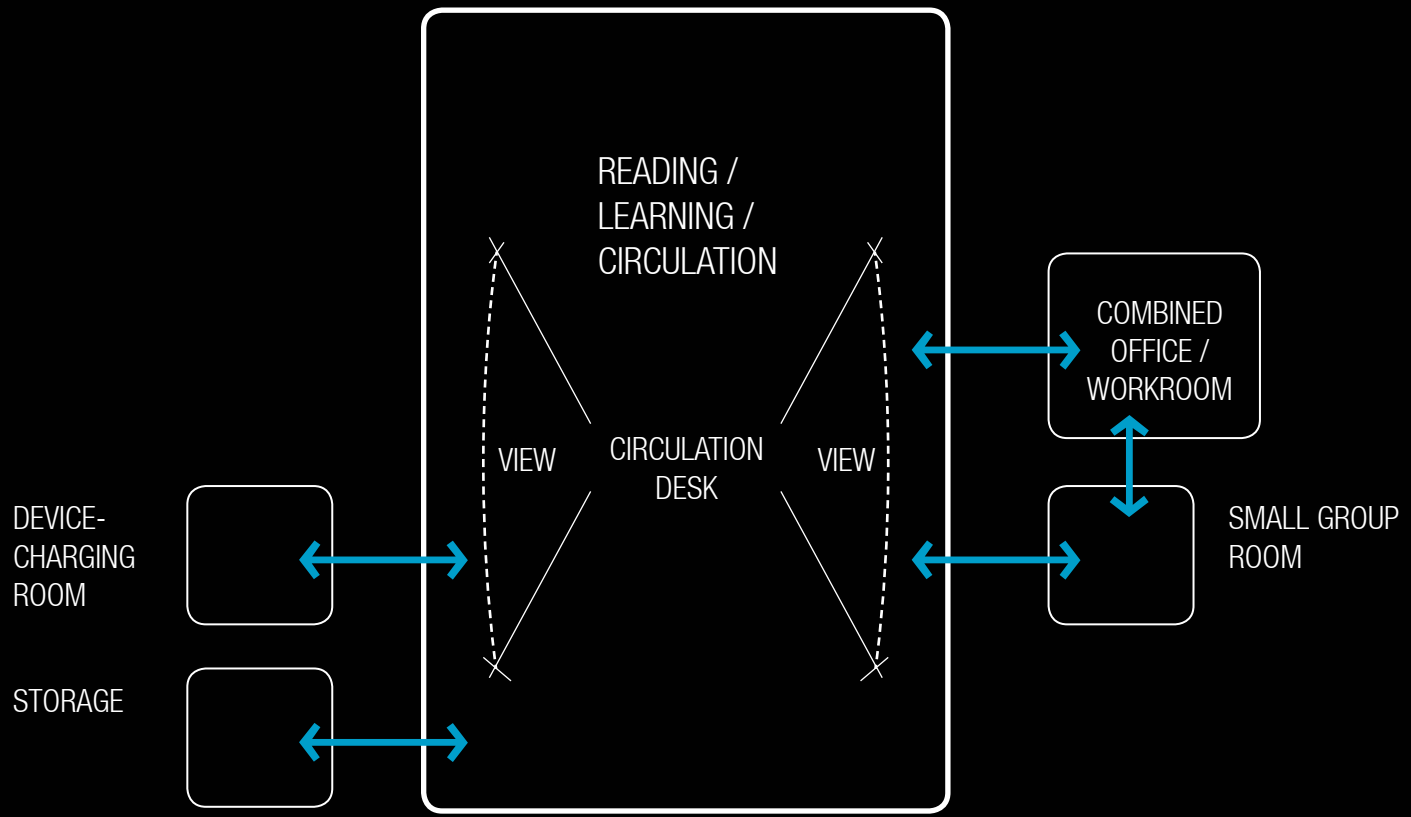
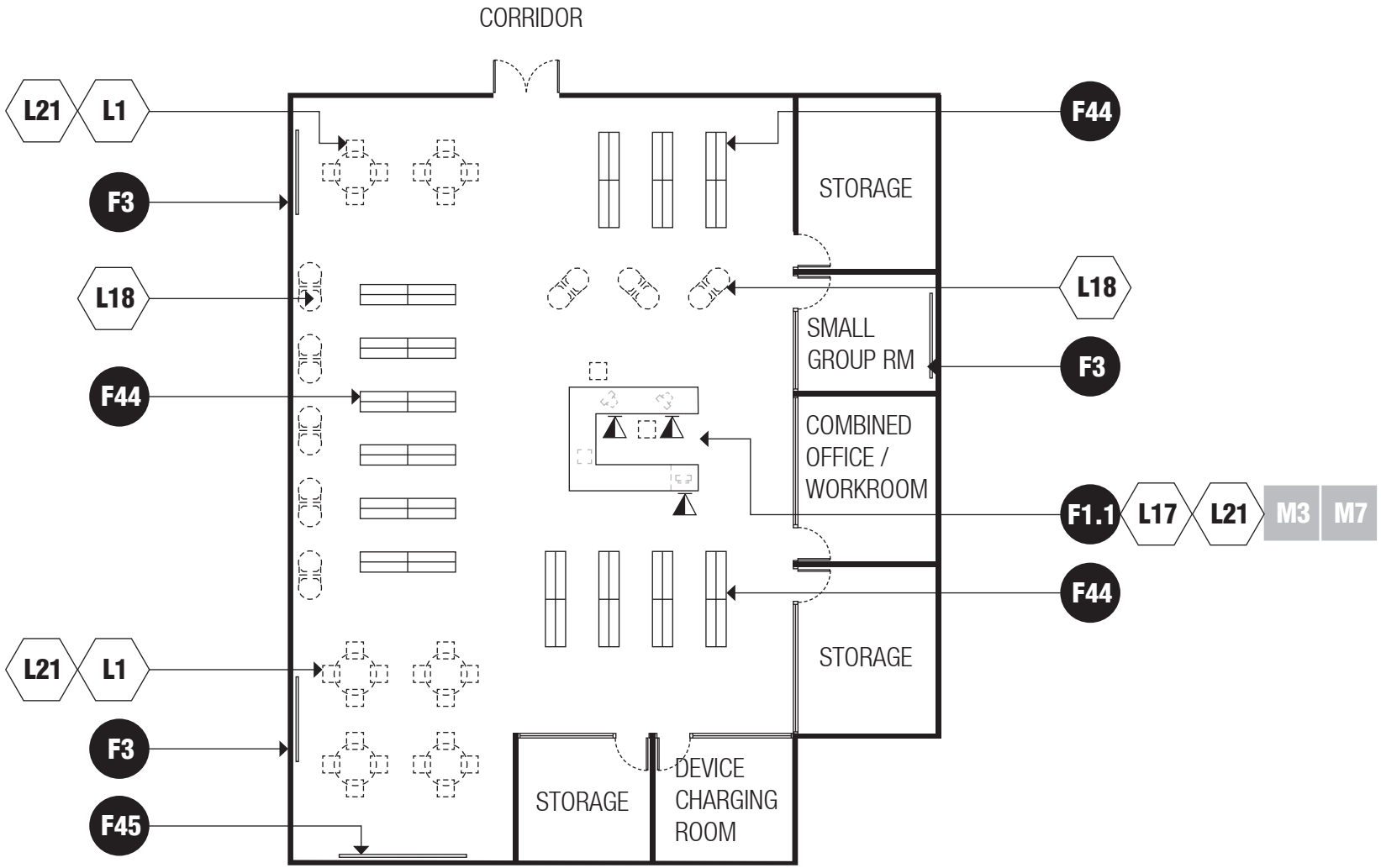


FIG. 7.0 // **MEDIA CENTER ADJACENCY DIAGRAM**



PKC-L /// **READING / LEARNING / CIRCULATION**

0’ 4’ 8’ 16’

size

2,200 SF

capacity

75 students

1 media specialist

community patrons after school hours

ancillary spaces

technical processing room

device charging room

combined office/workroom

storage

small group room

spatial relationships

circulation area located close to entrance / exit

program activities

reading and research

circulation of materials and resources including online catalogs

large group and small group instruction

provide meeting areas for community, staff, and parents

dramatic reading and storytelling

informal small group interaction

environmental considerations

recessed floor outlets at tables

adequate ventilation

lighting appropriate to task with switches to dim separate zones of media center

environmental sound control:

wall minimum: STC 45

ceiling minimum: CAC35

electrical outlets at entrance for future security system

electrical outlets at column locations

windows to provide natural sunlight

security of school when center is in use during after school hours

ceiling height in proportion to room dimensions

open flow for traffic in reference/ professional/periodical areas

electrical outlets in toe space of wall shelving

window treatment to darken room for AV presentation

mix of lounge furniture

finishes

flooring: carpet

LEGEND ///

● **fixed equipment**

F1.1 casework (circulation desk)

F3 marker board (in two locations, 8 LF ea)

F44 library case work*

F45 motorized projection screen

⬡ **loose furnishings**

L1 stackable/nesting chairs (32-55 per student enrollment)

L17 printer station

L18 lounge chairs

L21 work table (6-10 with various heights)

miscellaneous

M3 bar code reader

M7 desktop computer (2)

data drop

***shelving calculations per 3' shelves**

Picture thin: 20 books per foot / 60 books per shelf

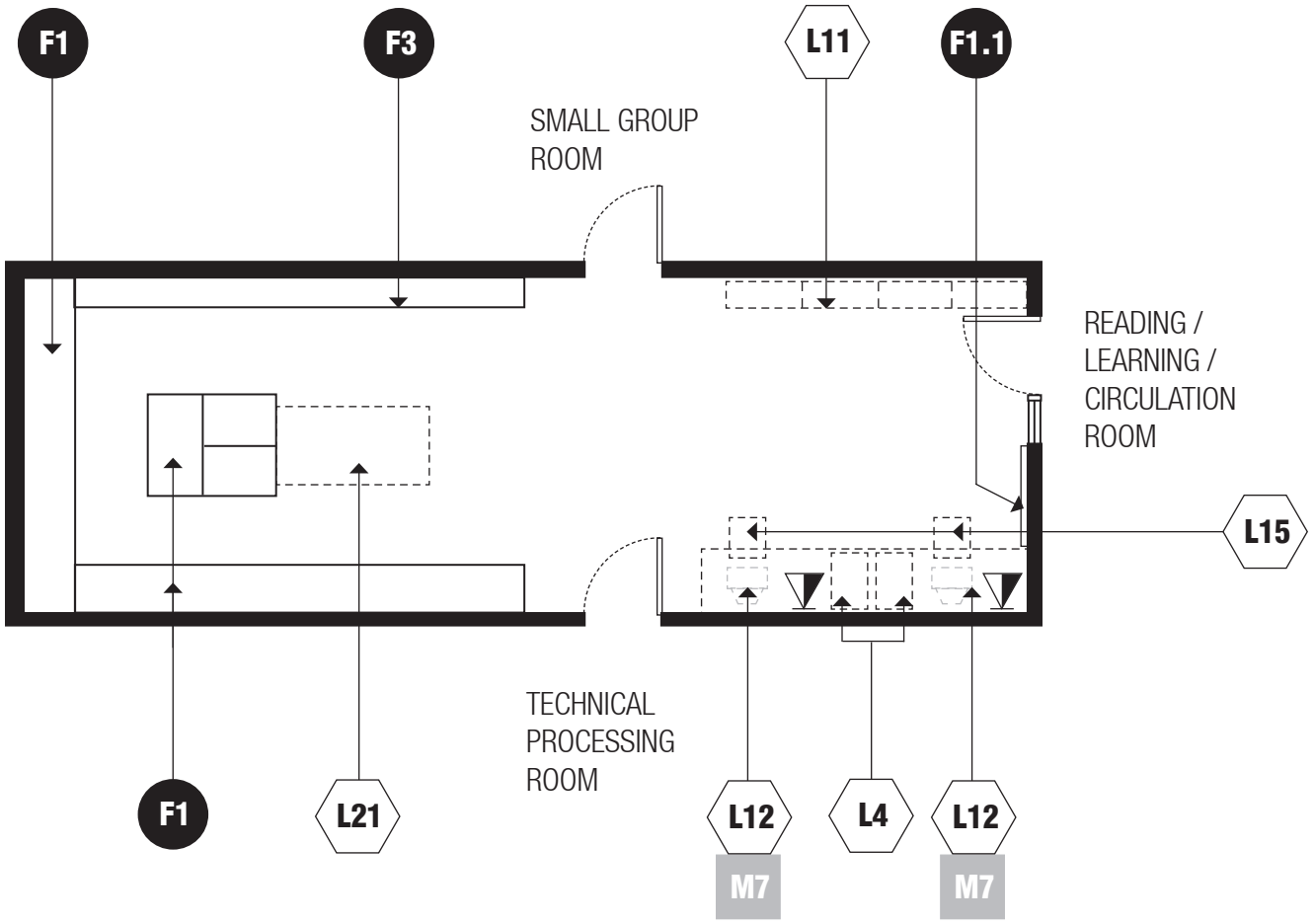
Standard size: 9 books per foot / 30 books per shelf

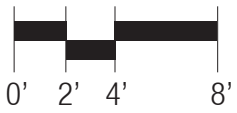
Reference books: 6 books per foot / 18 books per shelf

Periodicals: 1 per foot for display purposes

to calculate how many linear feet of shelving are required for a collection, take the total number of volumes and divide by the number of books per foot. For example, a primary collection of 5,000 volumes consisting of picture and thin books would require a total of 250 linear feet of shelving. shelves should only be two-thirds full. to allow for this, multiply the number of linear feet required by 1.33. example: 250 x 1.33=332.5 or 333 linear feet of shelving.

*VA guidelines recommend free standing shelving 36" in height or less.





PKC-L /// **COMBINED OFFICE / WORKROOM**

size

200 SF

capacity

media specialists

ancillary spaces

reading/learning/circulation

small group room

spatial relationships

adjacent and access to reading/ learning/circulation

adjacent to and access to office

adjacent to access to technical processing room

located behind circulation desk and wholeclass zone

program activities

storage of materials

storage of a/v materials and videotapes

scanning

digitizing

LEGEND ///

● **fixed equipment**

F1 base/wall cabinets and shelving (base cabinets with power)

F1.1 casework (poster/map storage)

F3 wall shelving

⬡ **loose furnishings**

L4 four drawer lateral file cabinet (1-2)

L11 adjustable height bookshelves

L12 admin workstation (2)

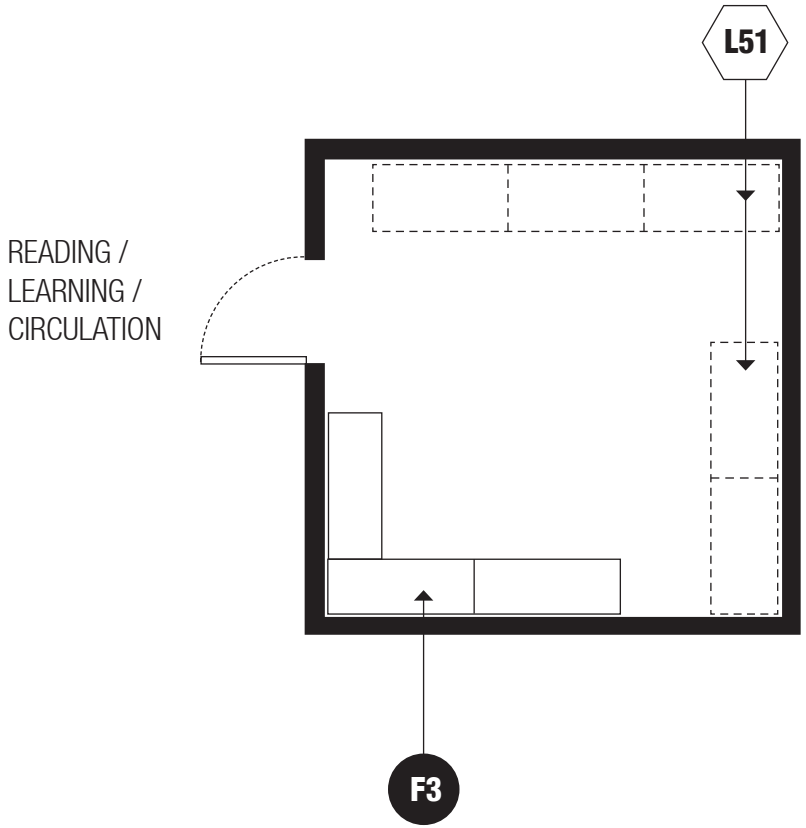
L15 task chair (2)

L21 work table

■ **miscellaneous**

M7 desktop computer (2)

▶| data drop



PKC-L /// DEVICE-CHARGING ROOM

size

100 SF

capacity

staff

ancillary spaces

n/a

spatial relationships

adjacent and access to reading/learning /circulation

program activities

overnight secure charging area for laptops/tablets

environmental requirements

secure metal door

electrical oulets designed around a 'parking' strategy for 5-6 laptop charging carts

LEGEND ///

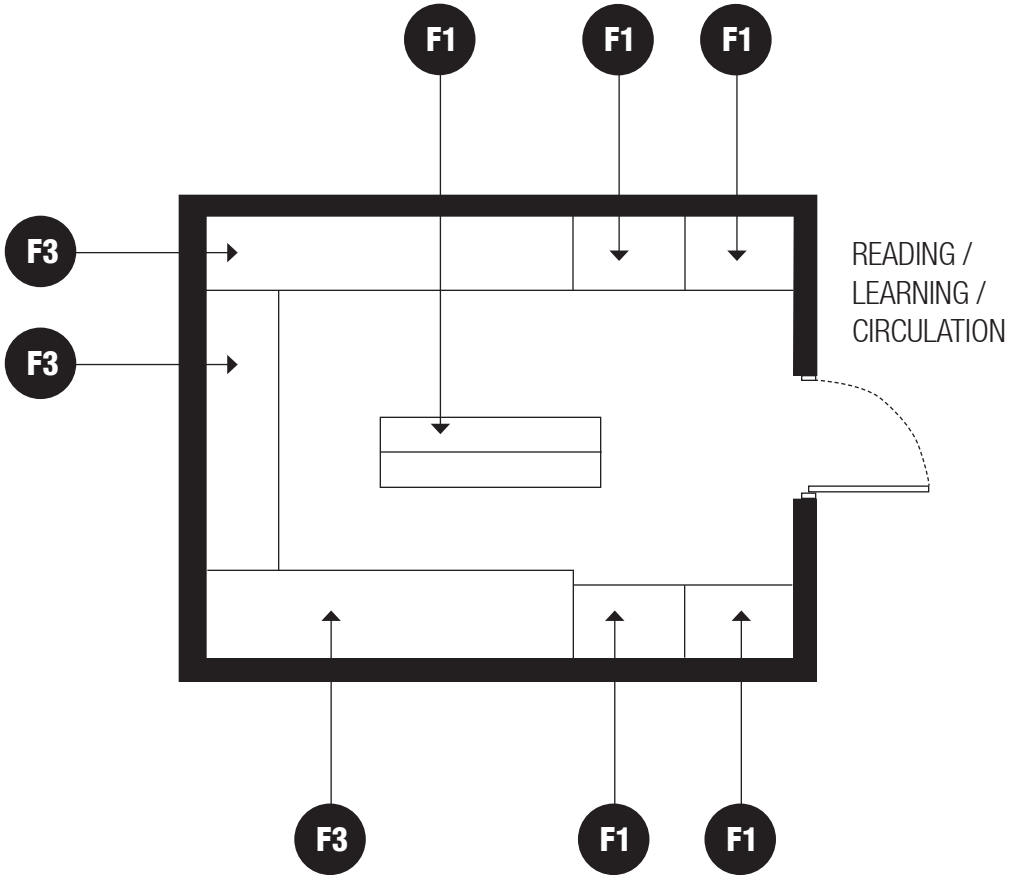
● **fixed equipment**

F3 wall shelving (no lower shelves)

⬡ **loose furnishings**

L51 laptop charging cart (5-6)





size

150 SF

capacity

staff

ancillary spaces

n/a

spatial relationships

near core classrooms

program activities

storing and retrieving books/supplies

LEGEND ///

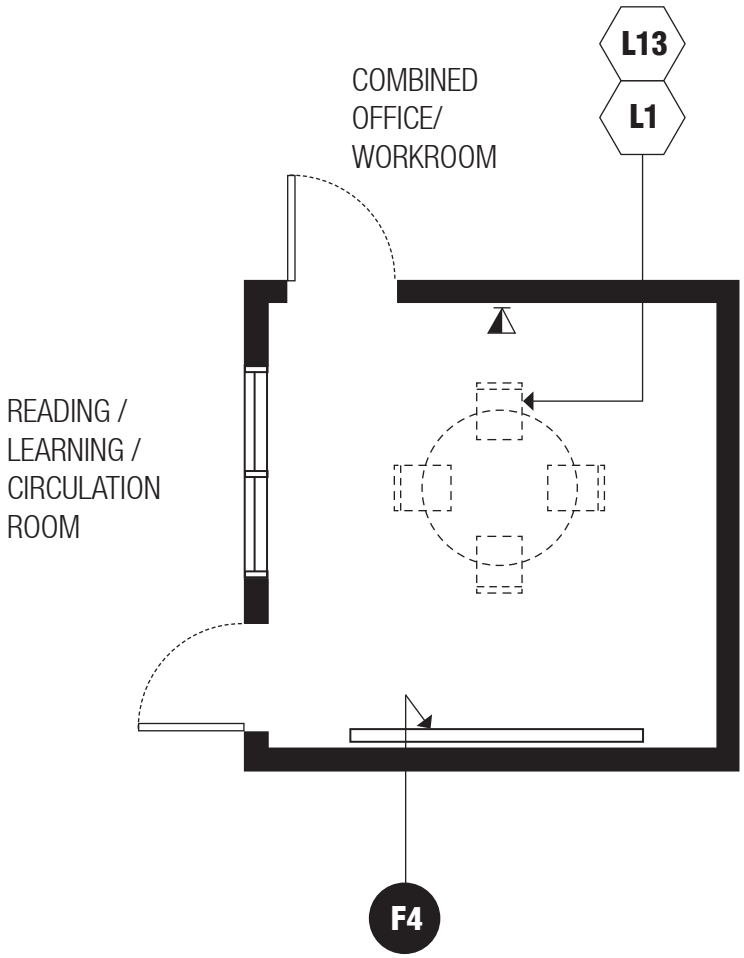
● **fixed equipment**

F1 base/wall cabinets and shelving

F3 wall shelving (variety of 12” and 24” deep shelving)



PKC-L /// **STORAGE**



size

150 SF

capacity

up to 8 persons

ancillary spaces

n/a

spatial relationships

adjacent and access to reading/learning/ circulation area

program activities

group research projects

meetings

listening and viewing

LEGEND ///

fixed equipment

F4 marker board (8 LF)

loose furnishings

L1 stackable/nesting chairs (4)

L13 small table

data drop



PKC-L /// SMALL GROUP ROOM

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PKC-PE /// **PHYSICAL EDUCATION**

MULTI-PURPOSE SPACE
STAGE

SPACE	QUANTITY	SF	TOTAL	NOTES
PHYSICAL EDUCATION				
Multi-Purpose Space	1	2,000	2,000	
Stage	1	800	800	
Playgrounds	--			
Total			**2,800**	

Comments //

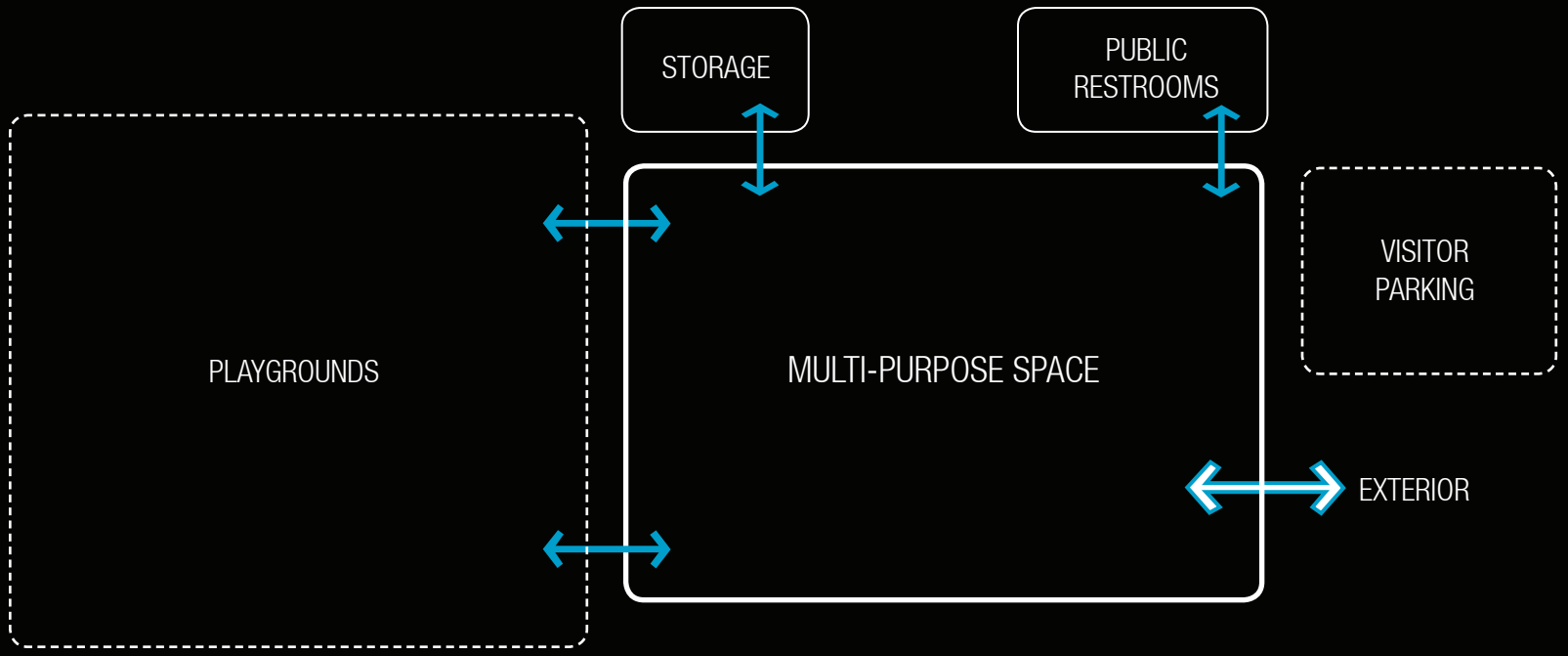
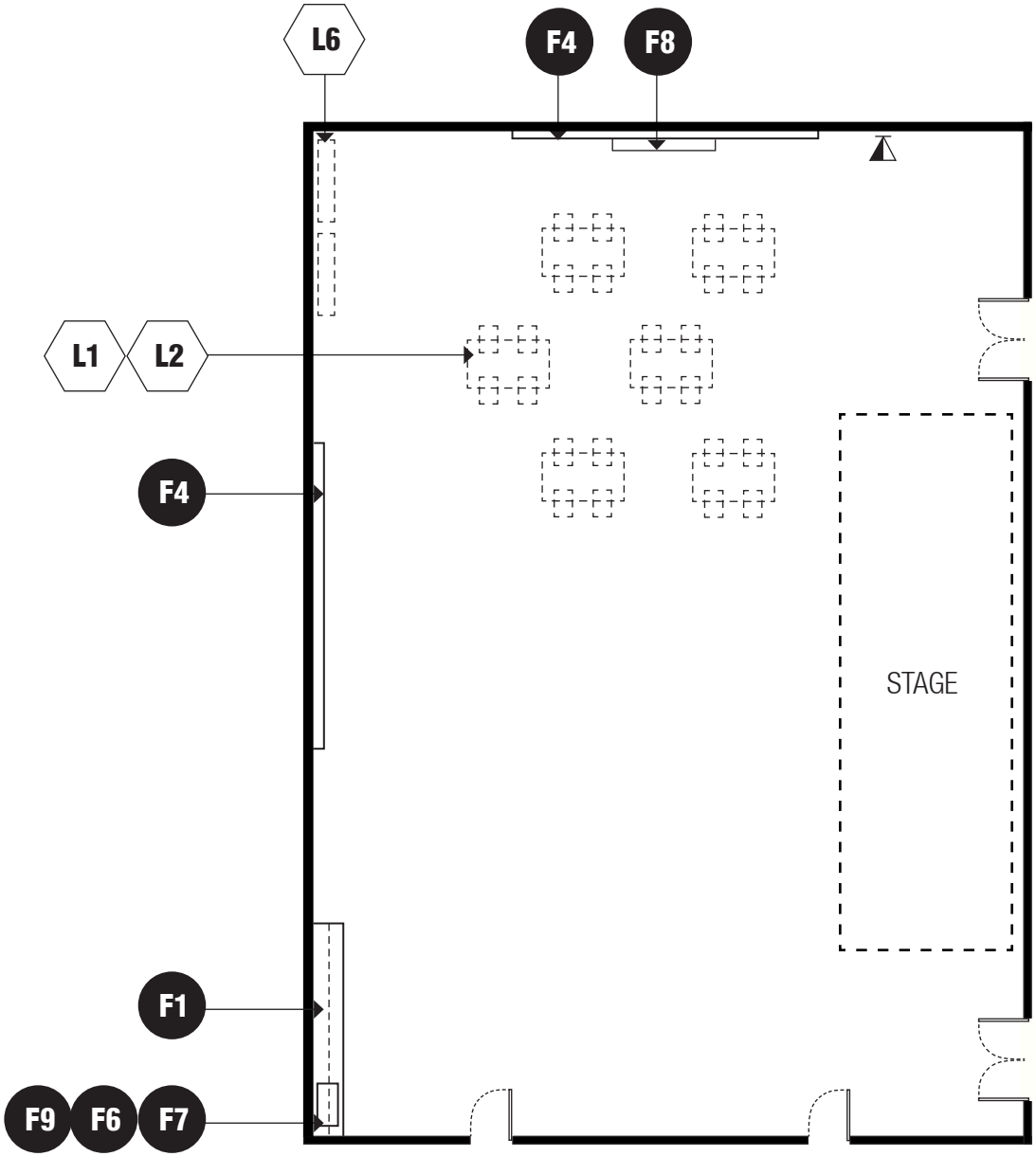


FIG. 8.0 // **PHYSICAL EDUCATION ADJACENCY DIAGRAM**



PKC-PE /// **MULTI-PURPOSE SPACE**



size

2,000 SF

capacity

students

teachers and staff

after school staff

community

finishes

flooring: resilient athletic flooring

spatial relationships

near after school entrance to building

near parking area

adjacent and access to after-school storage area

program activities

back-up physical education teaching

wellness area

after shool staff to tutor and counsel students

quiet area for students to play cards, work on homework, read

office space for after-school staff

plumbing

connections for sink with gooseneck faucet

environmental considerations

elevated ceiling, +/- 18 LF

uniform lighting

flexibility of space

adequate ventilation and ceiling fans

electrical outlets for equipment

must be able to isolate from the rest of the school after hours

drinking fountain in adjacent corridor

windows to provide natural light

LEGEND ///

fixed equipment

F1 base/wall cabinets and shelving

F4 marker board (on 2 walls, 16 LF each)

F6 soap dispenser

F7 towel dispenser

F8 wall mounted interactive electronic presentation device

F9 classroom sink

loose furnishings

L1 stackable/nesting chairs (22-26)

L2 stackable/nesting tables (6)

L6 mobile shelving

loose furnishings for after-school staff TBD

data drop

pre-kindergarten requirements

Engaging outdoor play areas are essential to the growth and education of pre-k students. The model pre-k center should have several small play areas, which are easily accessible to the classrooms. Smaller play spaces enable teachers to engage with children outdoors and to facilitate learning. Small spaces can also be more comfortable for children, easing their transition from inside to the outdoors and giving a better sense of control in their environment. Play spaces should include opportunities for children to move and manipulate parts (this can include outdoor blocks, logs, tree slices, sand, and water) and be engaging for both the students and the teachers. They should also include interaction with the natural world, to aid in creating calm and increasing attention spans. Model play spaces should provide for multiple sensory experiences for children.

Each play area should be able to accommodate two classrooms worth of students (up to 40 students) and be safely supervised by two teachers. Surfacing of the play spaces should consider the age of the students and avoid hard surfaces. Designers should also consider elements such as shade and creative seating space to promote comfortable use of the playgrounds.

Small, easy to access storage areas should be included with each play space. Play areas should comply with playground safety standards, city code and ADA requirements.

accessibility standards (figure 7.0)

plan for ramps and/or transfer points on composite play structures for access to play components on elevated decks.

meet the Americans with Disabilities Act guidelines

for percentage of components that are to be accessible by ramp and by transfer deck.

provide table and benches along accessible route.

provide upper-body strengthening devices as appropriate for age group and amount of supervision.

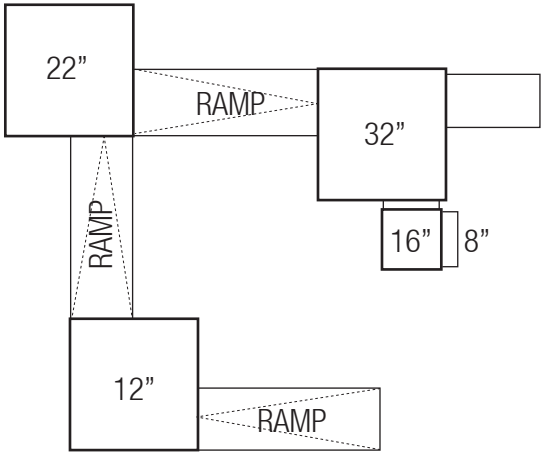


FIG. 7.0 //
TYPICAL RAMP AND TRANSFER DECK

PKC-AD /// **ADMINISTRATION**

LOBBY/GATHERING AREA
WELCOME CENTER
CONFERENCE ROOM
PRINICIPAL'S OFFICE
ADMINISTRATIVE ASSISTANT DESK
OFFICE - BUSINESS MANAGER
OFFICE - SOCIAL WORKER/PSYCHOLOGIST
OFFICE - REGISTRAR
OFFICE - OCCUPATIONAL THERAPIST
OFFICE - SPEECH PATHOLOGIST
OFFICE - PHYSICAL THERAPIST
ADMINISTRATIVE WORKROOM (OPTIONAL)
MAILROOM (OPTIONAL)
FAMILY CENTER (OPTIONAL)
RECORDS ROOM
SECURE STORAGE
STAFF TOILET
STUDENT SERVICES CONFERENCE ROOM
TEACHER'S LOUNGE
HEAD START FAMILY SERVICES OFFICE

SPACE	QUANTITY	SF	TOTAL	NOTES
ADMINISTRATION				
Lobby/Gathering area	1	400	400	
Welcome Center	1	400	400	
Conference Room	1	200	200	
Prinicipal's Office	1	180	180	
Administrative Assistant Desk	1	50	50	
Office - Business Manager	1	120	120	
Office - Social Worker/Psychologist	1	180	180	
Office - Registrar	1	120	120	
Office - Occupational Therapist	1	120	120	
Office - Speech Pathologist	1	120	120	
Office - Physical Therapist	1	120	120	
Administrative Workroom (OPTIONAL)	--	150	--	
Mailroom (OPTIONAL)	--	100	--	
Records Room	1	120	120	
Family Center (OPTIONAL)	--	200	--	
Secure Storage	1	150	150	
Staff Toilet	1	50	50	
Student Services Conference Room	1	150	150	
Teacher's Lounge	1	300	300	
Head Start Family Services Office	1	525	525	
Total			**3,305**	

Comments //

The overall total for the administration area may be + or - 10%. Some areas may be combined to facilitate circulation.
Some areas (*) may be located outside of the suite to make the best use of the existing building.

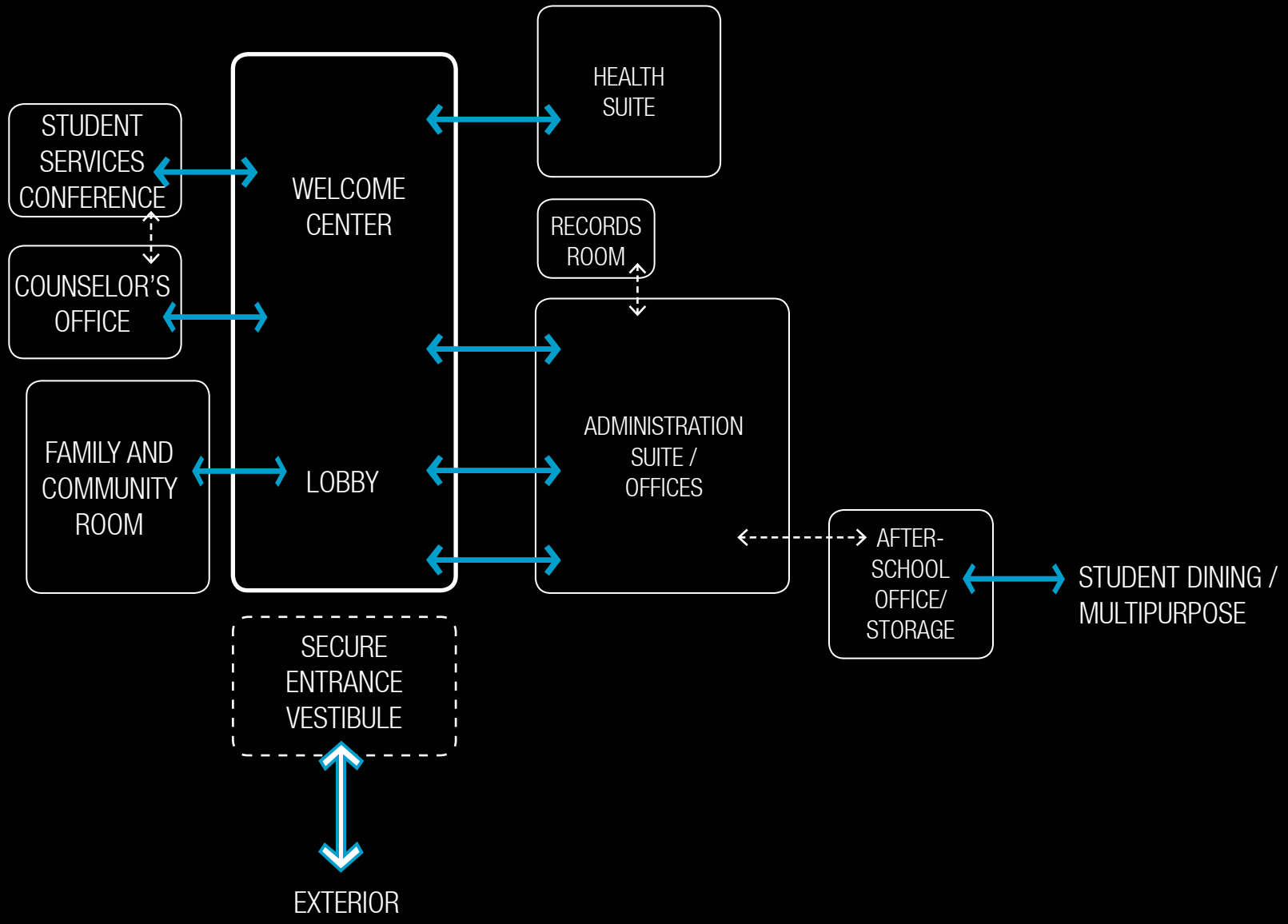
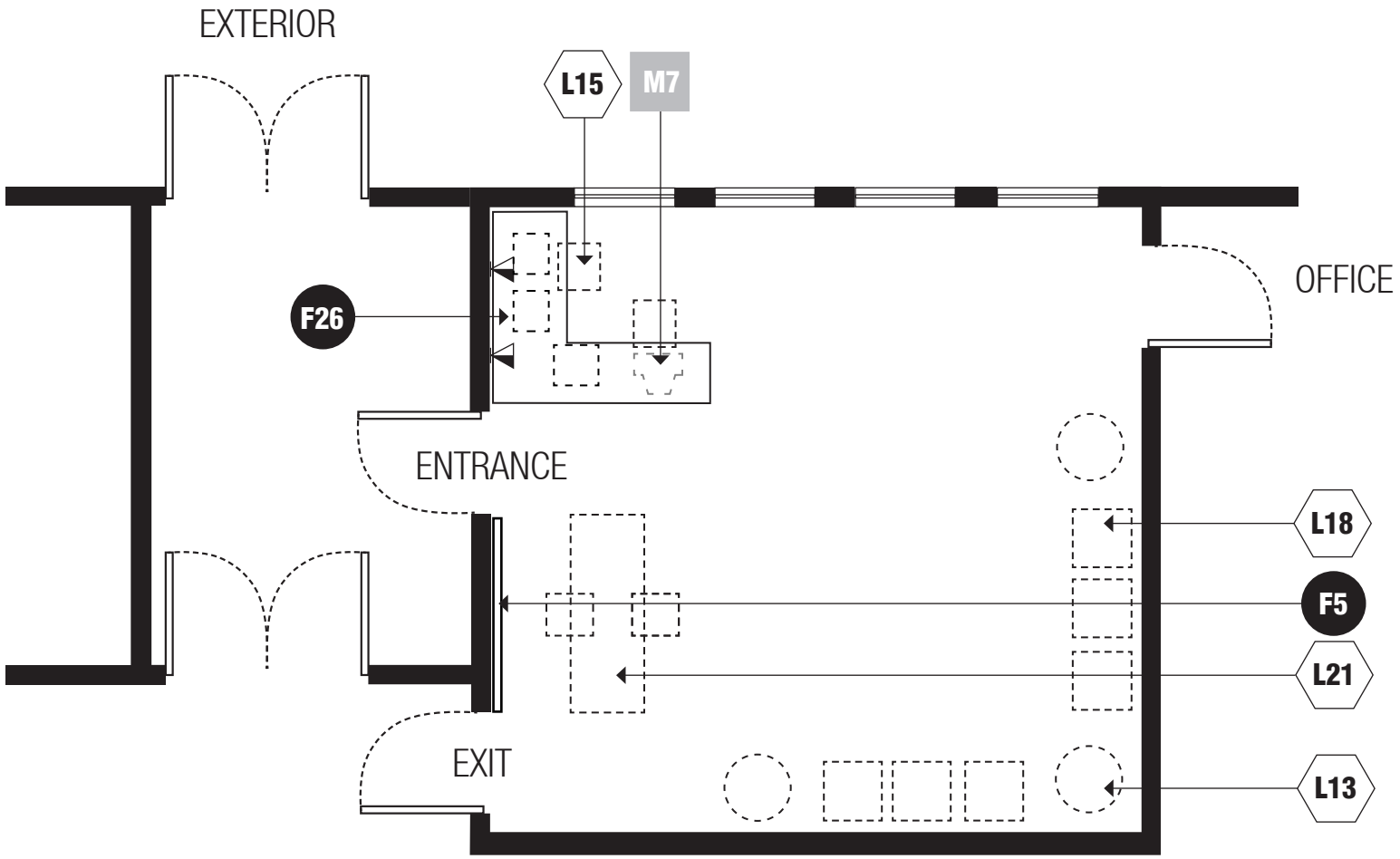


FIG. 9.0 // **ADMINISTRATION ADJACENCY DIAGRAM**



PKC-AD /// **WELCOME CENTER**



size

400 SF

capacity

administrative assistants

visitors/parents

students

spatial relationships

see illustration opposite page

located inside the main administrative area directly accessible from entry vestibule

near public restrooms

maximize views to exterior and main entry

public address alcove

closet (lockable)

program activities

greeting visitors

student waiting/pick up area

workstation for administrative assistant

second and final access control point prior to accessing the main school security check-point

LEGEND ///

● **fixed equipment**

F5 tackable/magnet wall surface (8 LF)

F26 reception counter (Finish carpentry)

⬡ **loose furnishings**

L13 small table (3)

L15 task chair (2)

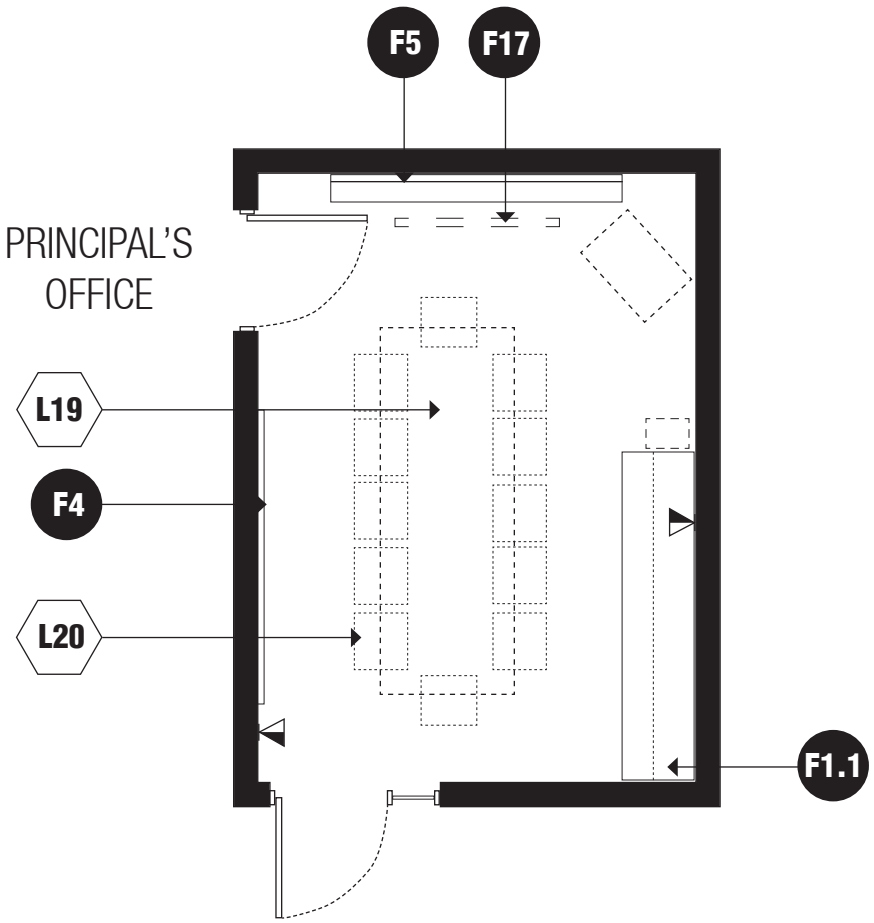
L18 lounge chairs (4-6)

L21 work table for check-in station

■ **miscellaneous**

M7 desktop computer

⚑ data drop





PKC-AD /// **CONFERENCE ROOM**

size

200 SF

capacity

staff

ancillary spaces

n/a

spatial relationships

near welcome center

centrally located within administrative area

adjacent and access to principal's offices

program activities

conferences with staff, students, parents, and visitors

LEGEND ///

● **fixed equipment**

F1.1 casework (6 LF)

F4 marker board (8 LF)

F5 tackable/magnet wall surface (8LF)

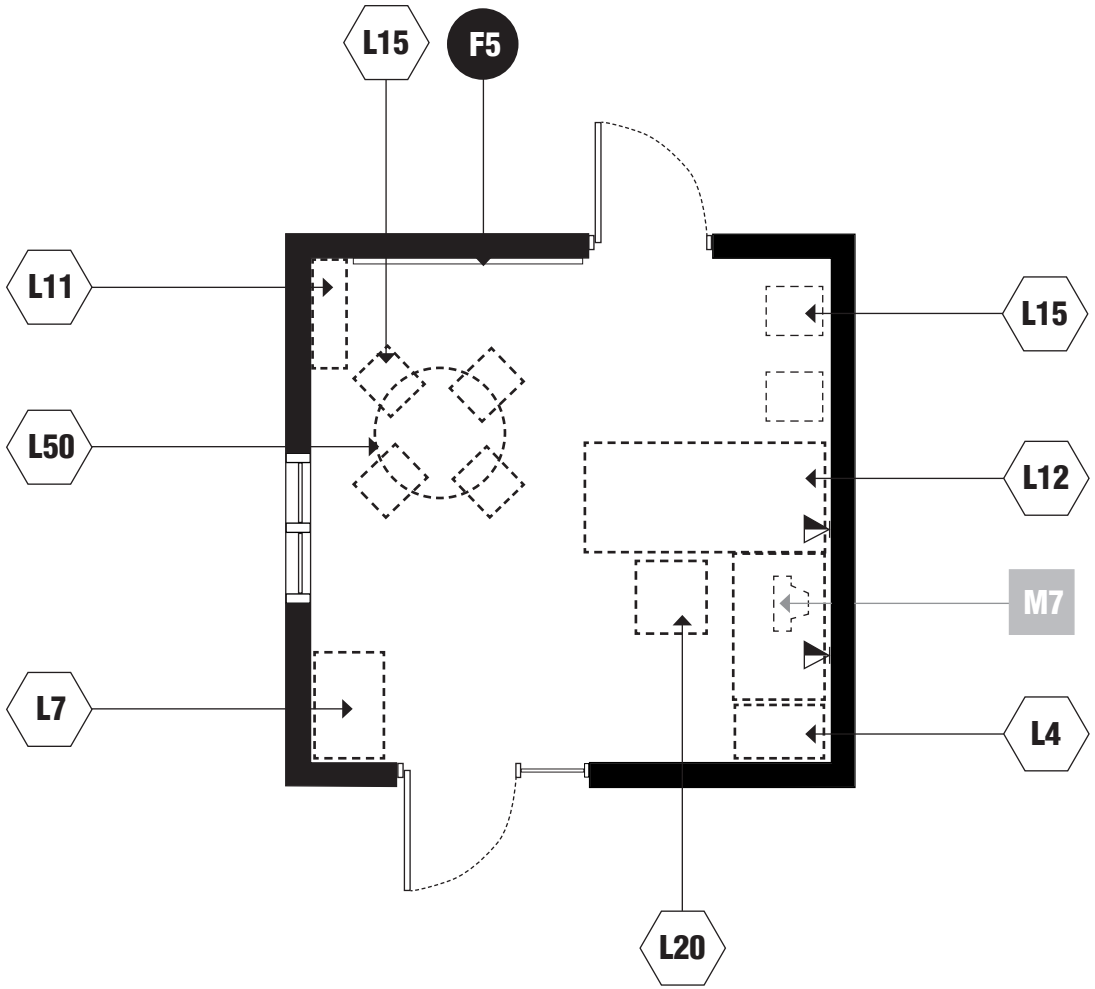
F17 audio/video recording and playback equipment

⬡ **loose furnishings**

L19 conference table (with table technology installations-VGA jacks, data outlets, power outlets, etc.)

L20 executive chairs (12)

▶| data drop





PKC-AD /// **PRINCIPAL’S OFFICE**

size

180 SF

capacity

principal

ancillary spaces

conference Room

spatial relationships

near main entry

near administrative assistant

adjacent and access to conference room

back door to secondary corridor, desirable

program activities

conferences with students, parents, teachers, staff, and visitors

curriculum development

research and planning

telephone communications

dealing with personnel issues

coordination of school and support services

LEGEND ///

● **fixed equipment**

F5 tackable/magnet wall surface

⬡ **loose furnishings**

L4 four-drawer file cabinet

L7 teacher's lockable wardrobe

L11 adjustable height bookshelves (12 LF)

L12 admin workstation

L15 task chair (4-6)

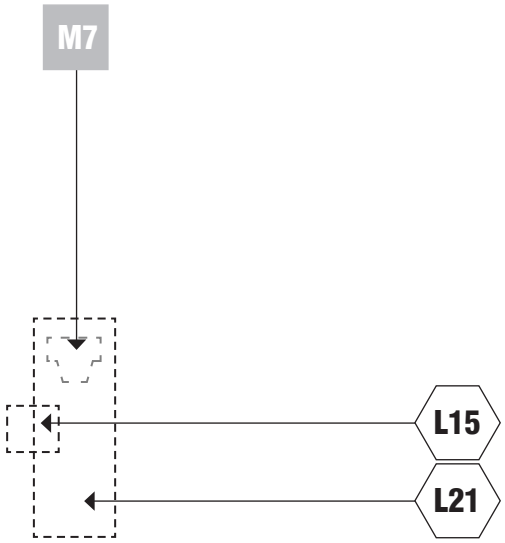
L20 executive chair

L50 small conference table

■ **miscellaneous**

M7 desktop computer

▶| data drop



size

50 SF

capacity

administrative assistants

spatial relationships

see illustration opposite page

located inside the main administrative area directly accessible from entry vestibule

near public restrooms

program activities

workstation for administrative assistant

second and final access control point prior to accessing the main school security check-point

LEGEND ///

fixed equipment

loose furnishings

L15 task chair (2)

L21 work table for check-in station

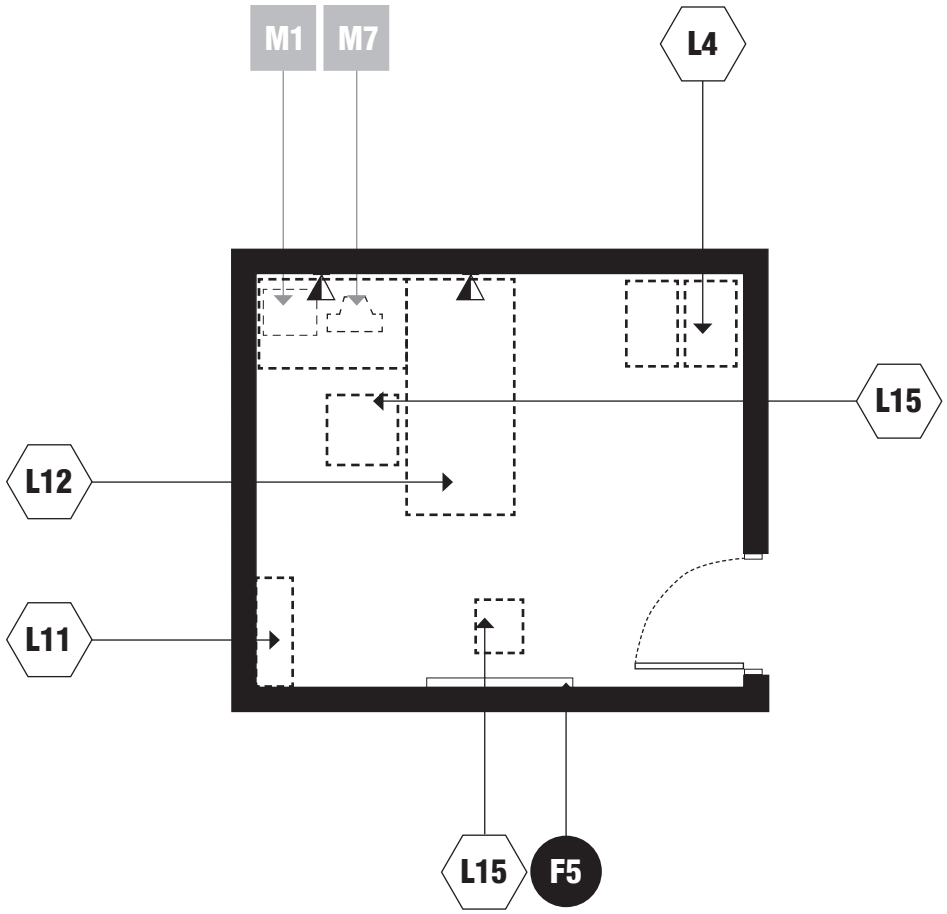
miscellaneous

M7 desktop computer

data drop



PKC-AD /// ADMIN ASSITANT DESK



size

120-150 SF

capacity

administrative staff

ancillary spaces

N/A

spatial relationships

adjacent to Welcome Center

adjacent to Records Room

program activities

typing

collating

sorting of Filing

preparing communications for mailing

telephone communications

LEGEND ///

● **fixed equipment**

F5 whiteboard

⬡ **loose furnishings**

L11 adjustable height bookshelves

L12 admin work station

L4 four-drawer file cabinet

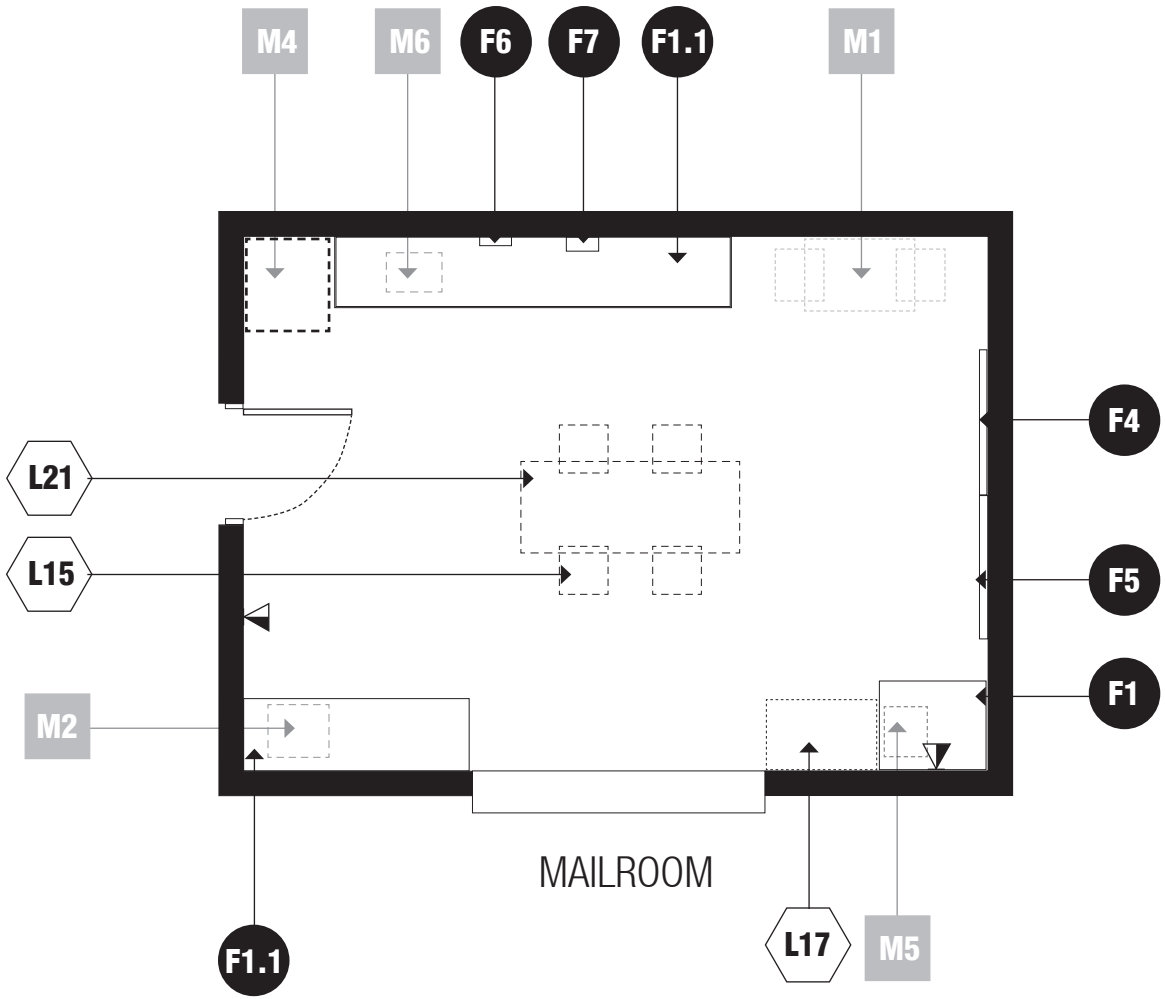
L15 ergonomic task chair

L15 guest chair

data drop



PKC-AD /// **OFFICE**





PKC-AD /// **ADMINISTRATIVE WORKROOM**

size

150 SF

capacity

secretaries and administrators

volunteers

staff

ancillary spaces

n/a

spatial relationships

near welcome center

adjacent to mail room

program activities

copying

collating

sorting of files

preparing communications for mailing

binding reports

telephone communications

plumbing

plumbing connections

sink,single/deep bowl

LEGEND ///

● **fixed equipment**

F1 base/wall cabinets and shelving

F1.1 casework (base/wall cabinets and shelving)

F4 marker board (4 LF)

F5 tackable/magnet wall surface (4 LF)

F6 soap dispenser

F7 towel dispenser

⬡ **loose furnishings**

L15 task chair (4)

L17 printer station

L21 work table

■ **miscellaneous**

M1 high speed and/or Large format printers

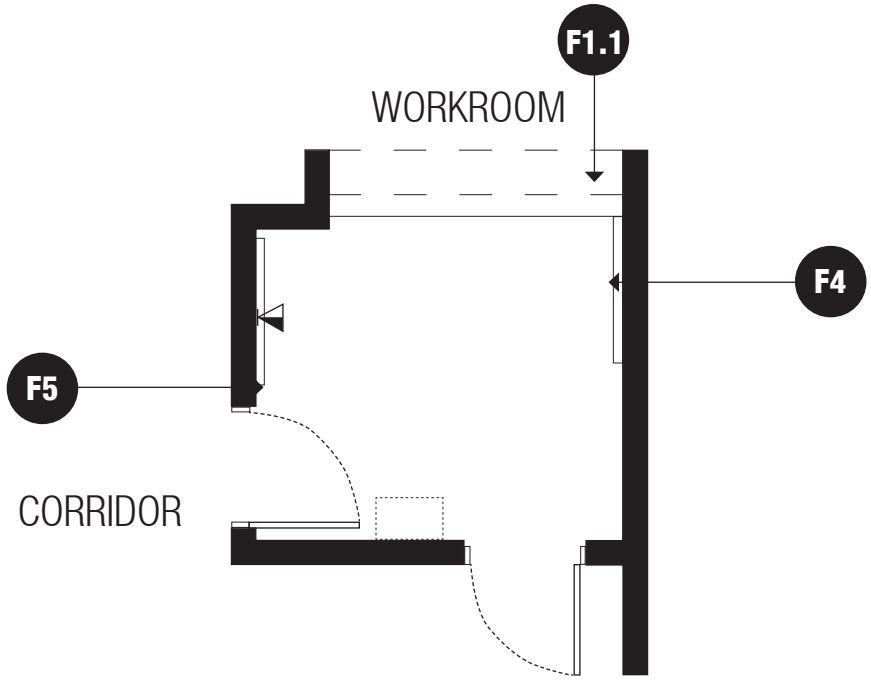
M2 color printers

M4 photocopy machine

M5 digital scanner

M6 laminator

▶| data drop



size

100 SF

capacity

staff

faculty

ancillary spaces

n/a

spatial relationships

adjacent to administrative workroom

located in administrative area

accessible from main corridor

program activities

delivery of general mail

LEGEND ///

● **fixed equipment**

F1.1 casework - mail slots

12” wide x 6” high x 15” deep

(65, 80, 95 total slots) pass-through

cabinets below

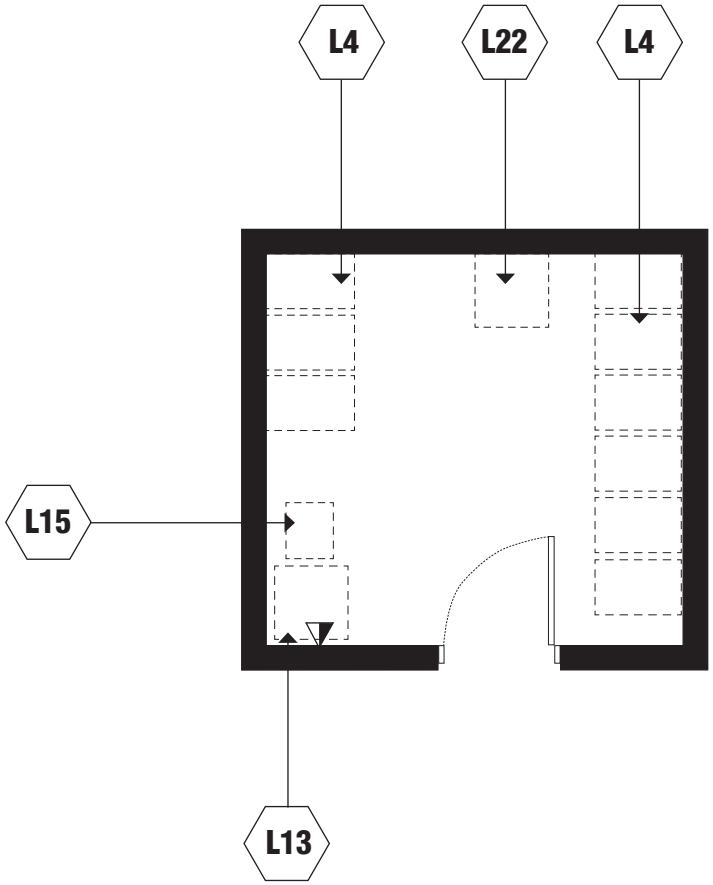
F4 marker board (4 LF)

F5 tackable/magnet wall surface (4 LF)

▶ data drop



PKC-AD /// **MAILROOM**



PKC-AD /// RECORDS ROOM

size

120 SF

capacity

secretaries

staff

ancillary spaces

n/a

spatial relationships

near main office

program activities

storing of money and other valuable items

storage of files and records

accessible to administration staff

LEGEND ///

loose furnishings

L4 four-drawer file cabinet (8-10 fireproof file cabinets)

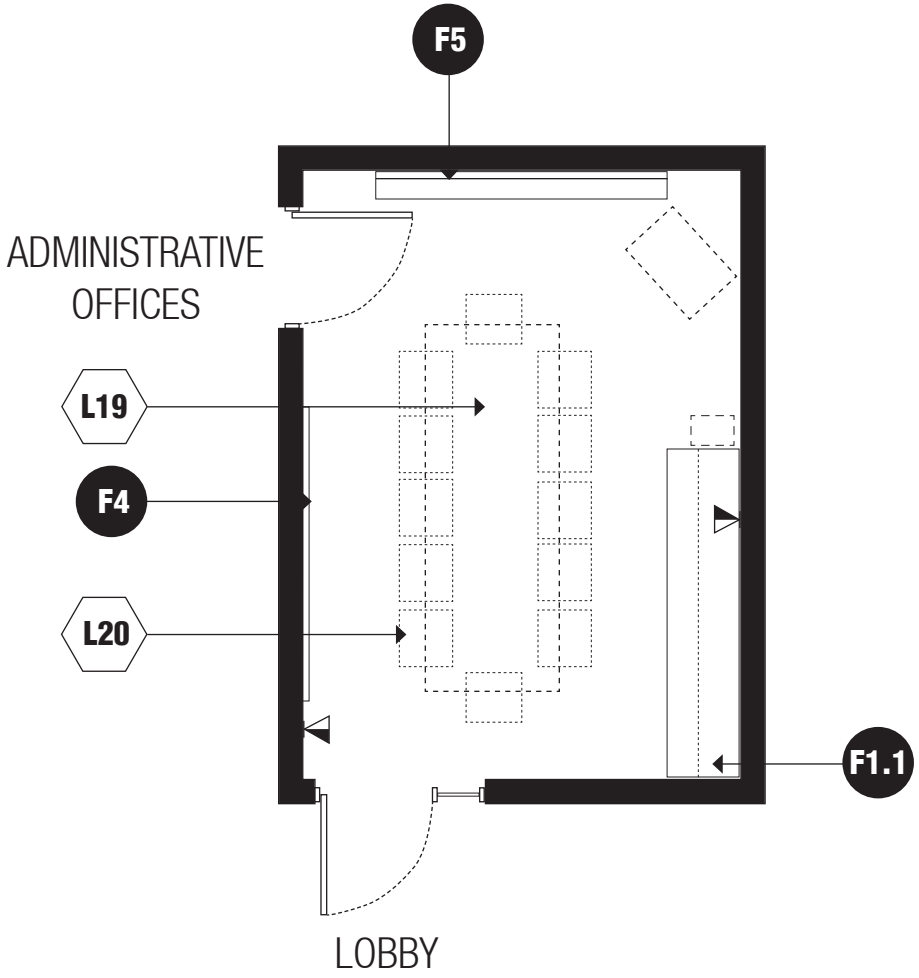
L13 small table

L15 chair

L22 safe

data drop




F5
ADMINISTRATIVE
OFFICES
L19
F4
L20
F1.1
LOBBY


0’
2’
4’
8’

size

200 SF

capacity

staff

family and students

ancillary spaces

n/a

spatial relationships

near welcome center

centrally located within administrative area

program activities

conferences with staff, students, parents, and visitors

LEGEND ///

● **fixed equipment**

F1.1 casework (6 LF)

F4 marker board (8 LF)

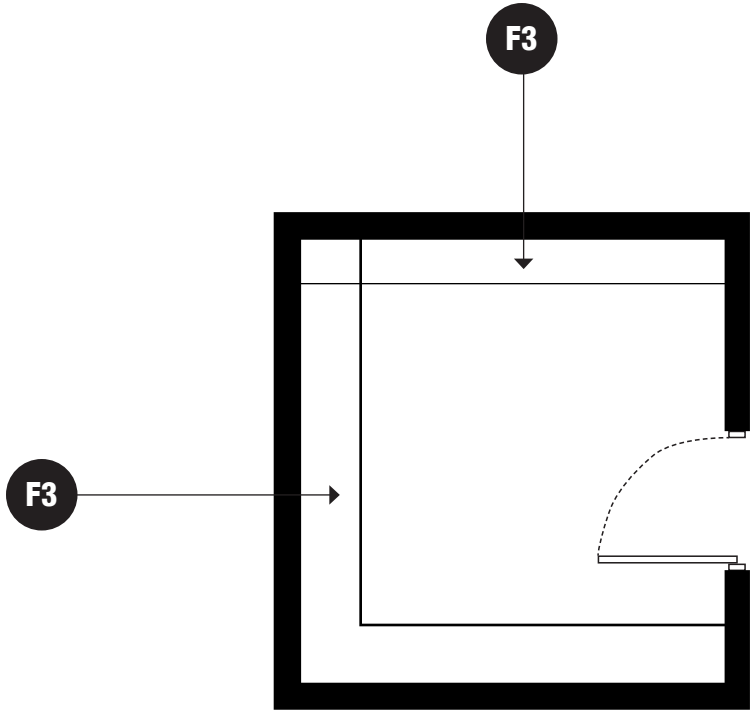
F5 tackable/magnet wall surface (8LF)

⬡ **loose furnishings**

L19 conference table (with table technology installations-VGA jacks, data outlets, power outlets, etc.)

L20 executive chairs (12)

▶| data drop





PKC-AD /// **SECURE STORAGE**

size
150 SF
capacity
n/a
ancillary spaces
n/a
spatial relationships
adjacent and access to administrative offices
program activities
secure storage
environmental considerations
uniform lighting
security of door
finishes
flooring:
resilient tile flooring
base:
resilient base
ceiling:
exposed structure
walls:
painted concrete masonry units
fire suppression
fire supression system
HVAC
supply/return air system
electrical
single level switching
fluorescent lighting
duplex receptacles
electronic safety and security
life safety devices per code

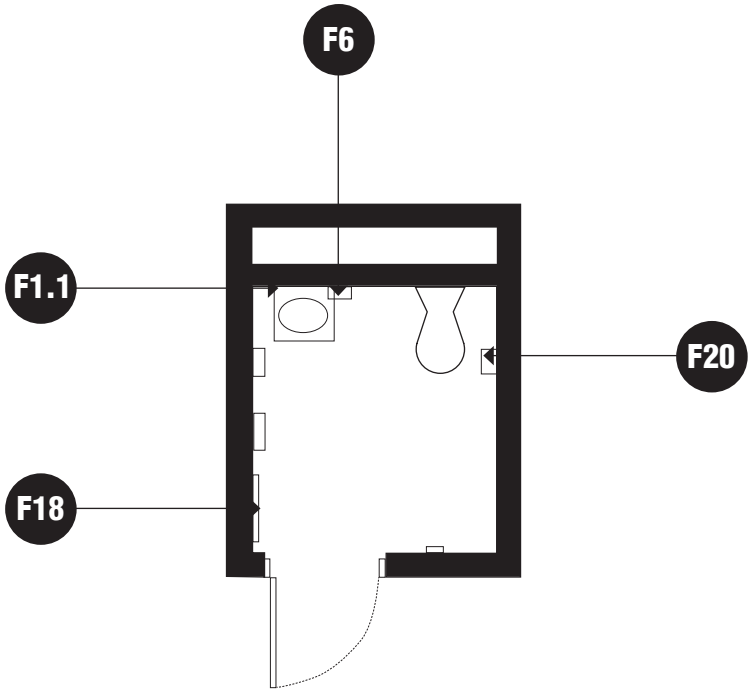
LEGEND ///

● **fixed equipment**

F3 wall shelving (12” and 18” deep)

NOTES //

1. Finishes/features: refer to _____ for specification references.
2. Loose furnishings and features shown represent one of many possible solutions.



size

50 SF

capacity

staff

spatial relationships

near welcome center

near principal's office

plumbing

wall-mounted water closet

wall-mounted lavatory

plumbing connections

floor drain

LEGEND ///

● **fixed equipment**

F1.1 casework (wall cabinet)

F7 towel dispenser

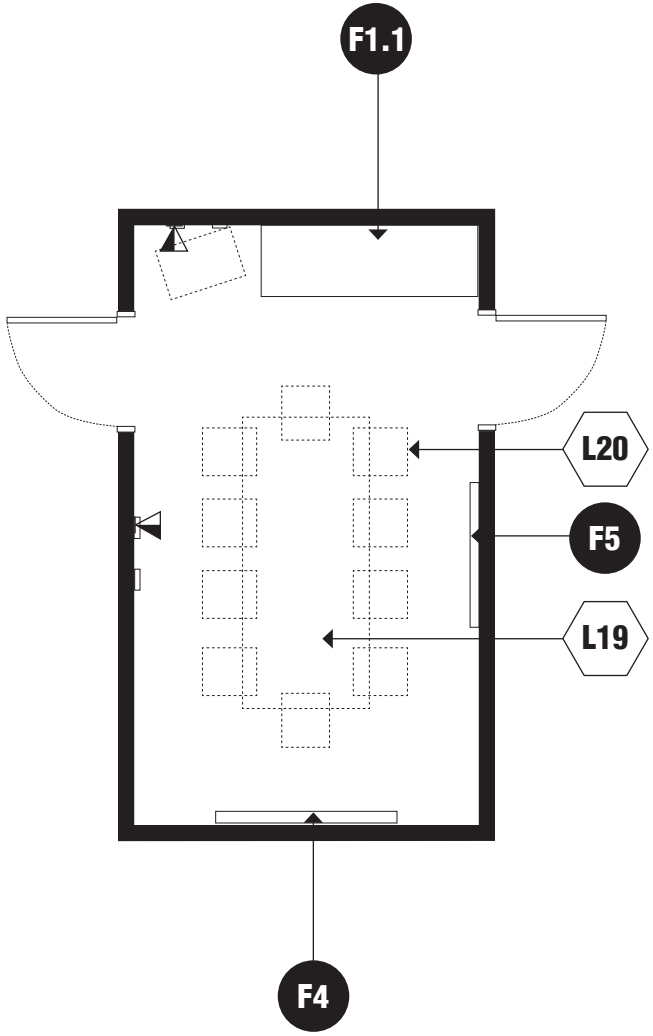
F18 mirror

F20 bathroom accessories



PKC-AD /// **STAFF TOILET**

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PKC-AD /// **STUDENT SERVICES CONF RM**

size

150 SF

capacity

staff

students

parents

visitors

ancillary spaces

n/a

spatial relationships

adjacent and access to counselor's office

adjacent to parent or welcome space

program activities

conferences with staff, students, parents, and visitors

IEP meetings

LEGEND ///

● **fixed equipment**

F1.1 casework (6 LF)

F4 marker board (8 LF)

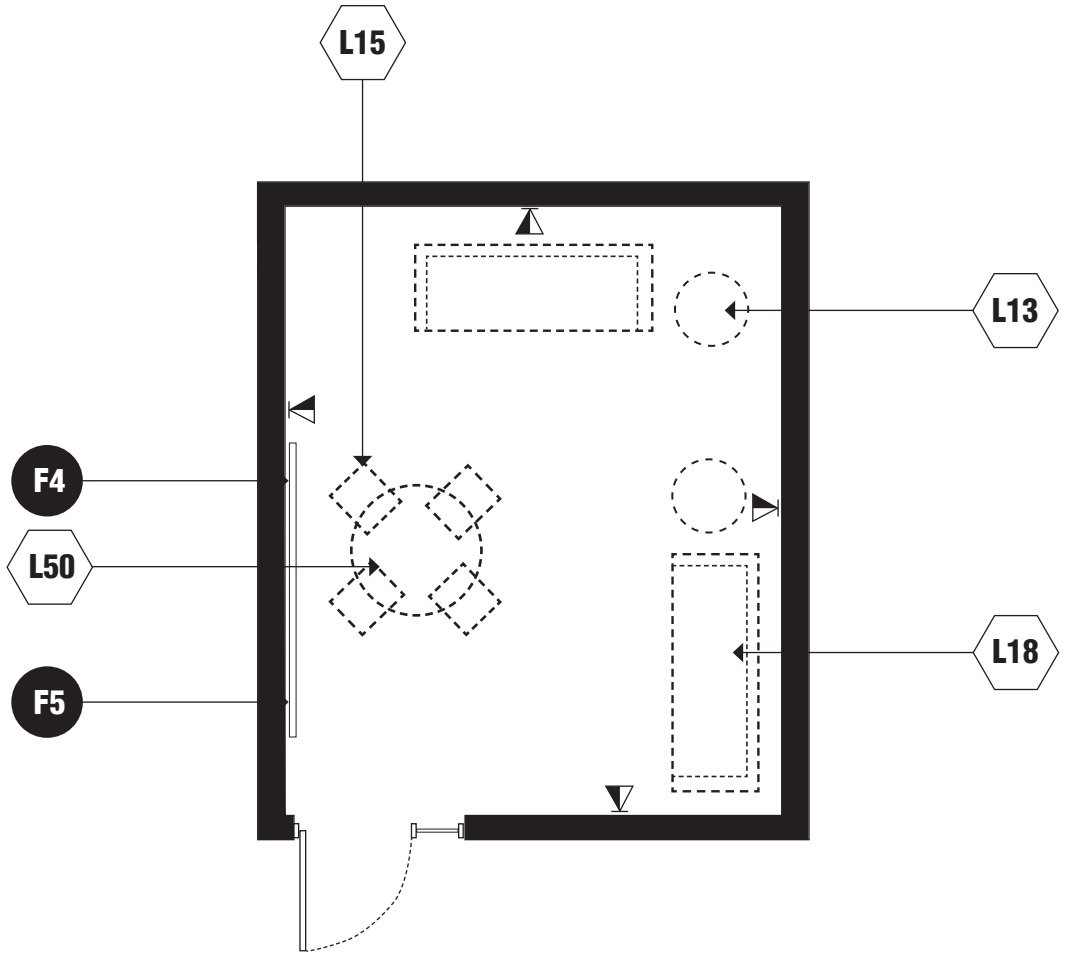
F5 tackable/magnet wall surface (4 LF)

⬡ **loose furnishings**

L19 conference table (with table technology installations- VGA jacks, data outlets, power outlets, etc.)

L20 executive chairs (10)

▶| data drop





PKC-AD /// **TEACHER’S LOUNGE**

size

300 SF

capacity

staff

7-10 teachers

ancillary spaces

n/a

spatial relationships

near welcome center

centrally located within administrative area

program activities

teacher gathering

LEGEND ///

● **fixed equipment**

F4 marker board (8 LF)

F5 tackable/magnet wall surface (8LF)

⬡ **loose furnishings**

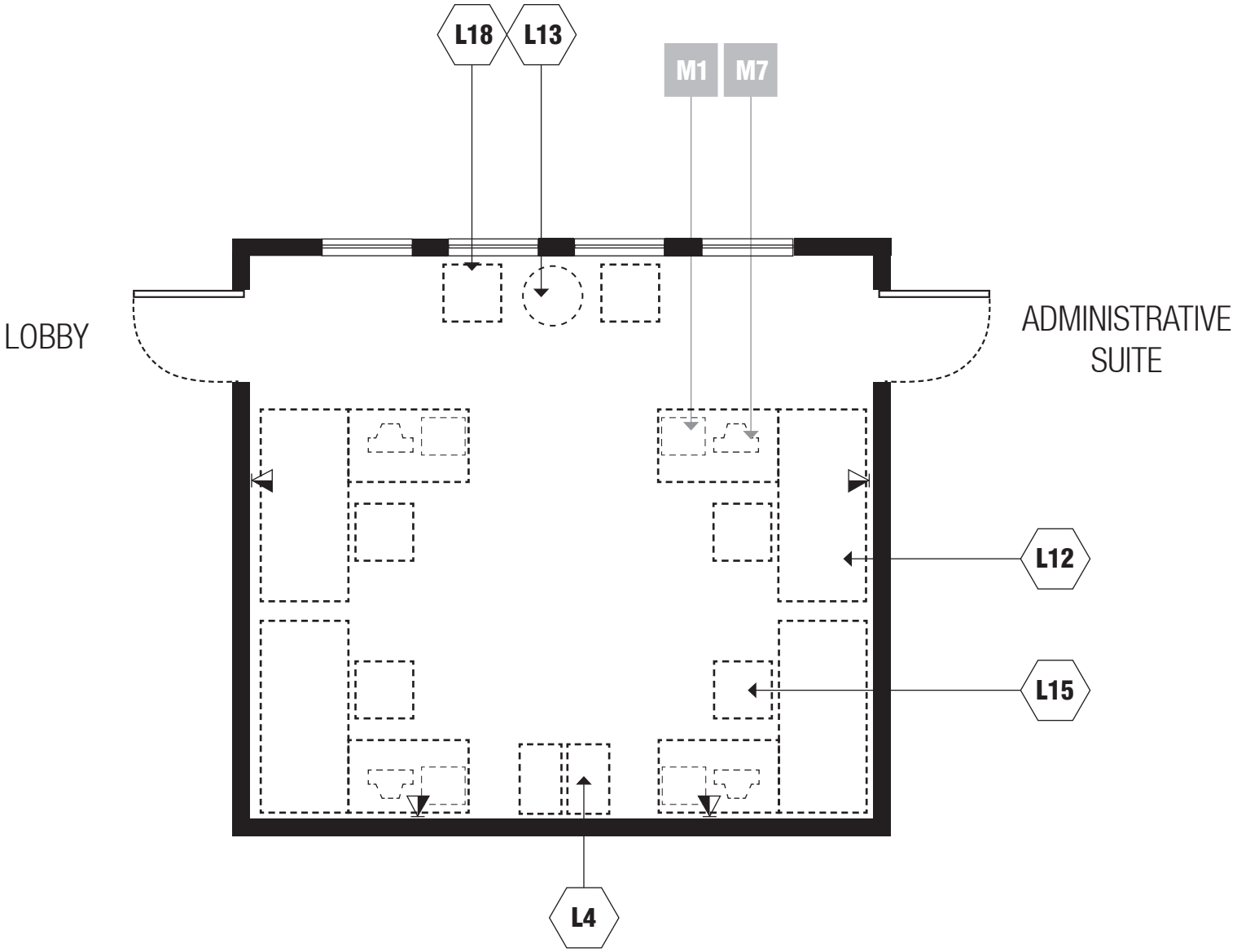
L13 small table

L15 task chair (4-6)

L18 lounge chair and/or couch

L50 small conference table

▶| data drop



PKC-AD /// **HEAD START FAMILY SERVICES OFFICE**



size

525 SF

capacity

administrative staff

4-6 workstations

visitors/parents

spatial relationships

see illustration opposite page

located inside the main administrative area

located near lobby

program activities

typing

collating

sorting of Filing

preparing communications for mailing

telephone communications

LEGEND ///

fixed equipment

loose furnishings

L4 four-drawer file cabinet

L12 admin work station

L13 small table

L15 ergonomic task chair

L18 lounge chair

miscellaneous

M1 high speed and/or large format printers

M7 desktop computer

data drop

PKC-CF /// **CHILD FIND**

CHILD FIND SPECIALIST OFFICE
SPEECH PATHOLOGIST OFFICE
PSYCHOLOGIST OFFICE
SPED COORDINATOR OFFICE
EDUCATIONAL EVALUATORS OFFICE
RECEPTIONIST
SOCIAL WORKER
WAITING AREA
OBSERVATION ROOM
SCREENING ROOM
RESTROOM
FAMILY RESTROOM
CONFERENCE ROOM
STORAGE ROOM

SPACE	QUANTITY	SF	TOTAL	NOTES
ADMINISTRATION				
Child Find Specialist Office	1	120	120	
Speech Pathologist Office	1	120	120	
Psychologist Office	1	120	120	
SPED Coordinator Office	1	150	150	
Educational Evaluators Office	2	120	240	
Receptionist	1	100	100	
Social Worker	1	120	120	
Waiting Area	1	300	300	
Observation Room	1	400	400	
Screening Room	1	400	400	
Restroom	2	50	100	
Family Restroom	2	160	320	
Conference Room	1	400	400	
Storage Room	1	50	50	
Total			**2,940**	

Comments //

NOTE: Child Find is optional and site-specific.

The overall total for the administration area may be + or - 10%. Some areas may be combined to facilitate circulation.
Some areas (*) may be located outside of the suite to make the best use of the existing building.

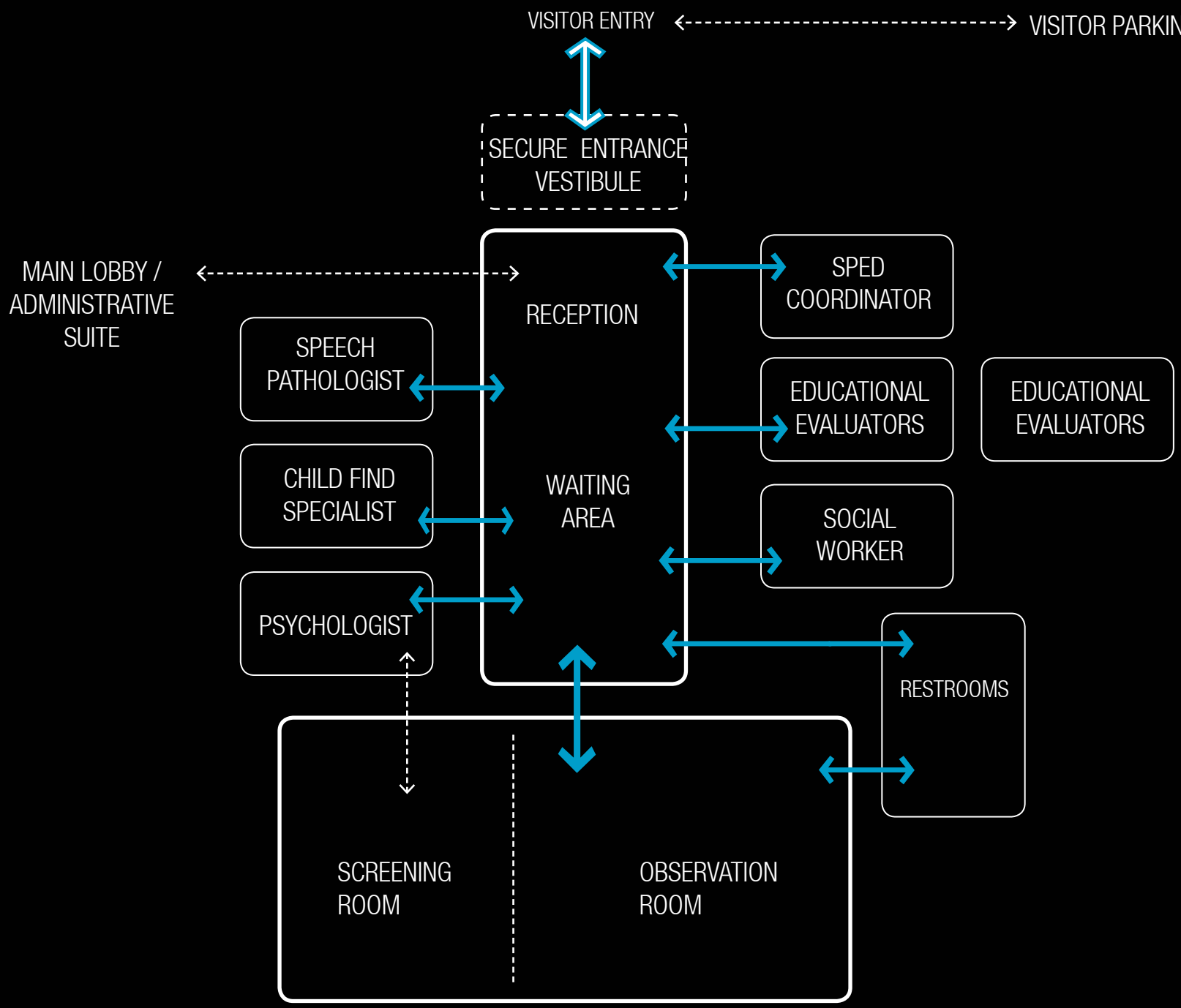
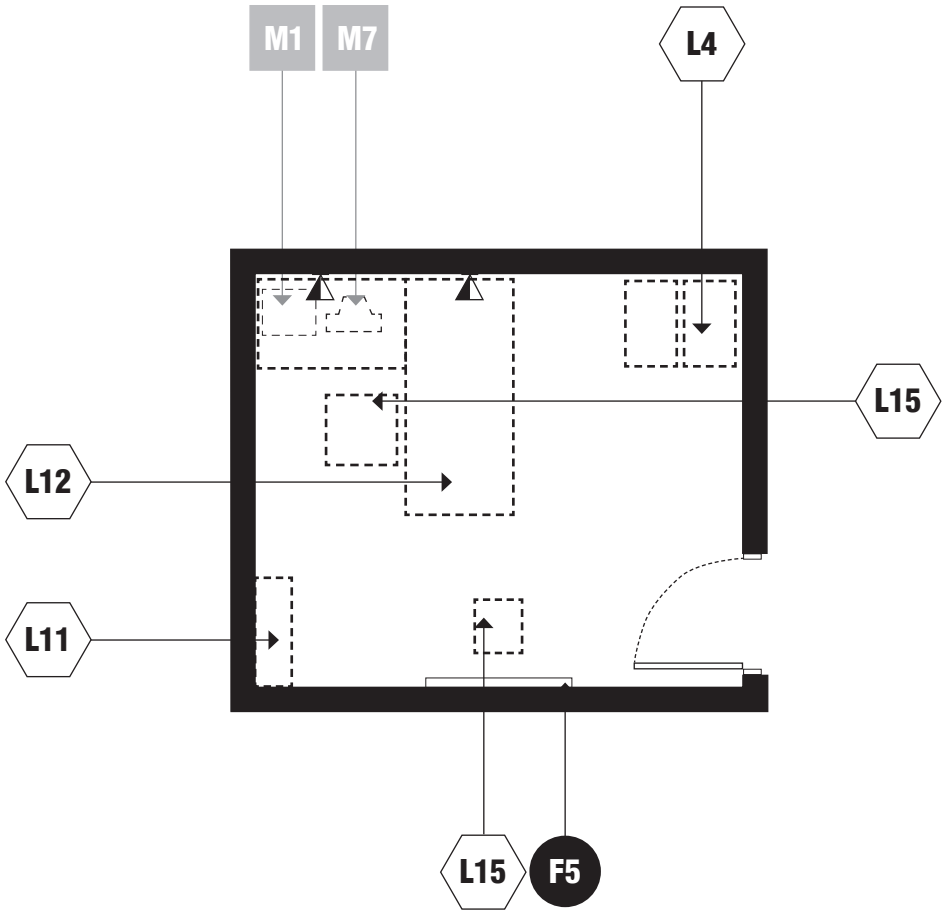
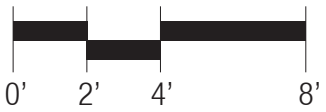


FIG. 10.0 // **CHILD FIND ADJACENCY DIAGRAM**





PKC-CF /// **OFFICE, TYPICAL**

size

150 SF

capacity

administrative staff

ancillary spaces

n/a

spatial relationships

adjacent to Welcome Center

adjacent to Records Room

program activities

typing

collating

sorting of Filing

preparing communications for mailing

telephone communications

LEGEND ///

● **fixed equipment**

F5 whiteboard

⬡ **loose furnishings**

L11 adjustable height bookshelves

L12 admin work station

L4 four-drawer file cabinets

L15 ergonomic task chair

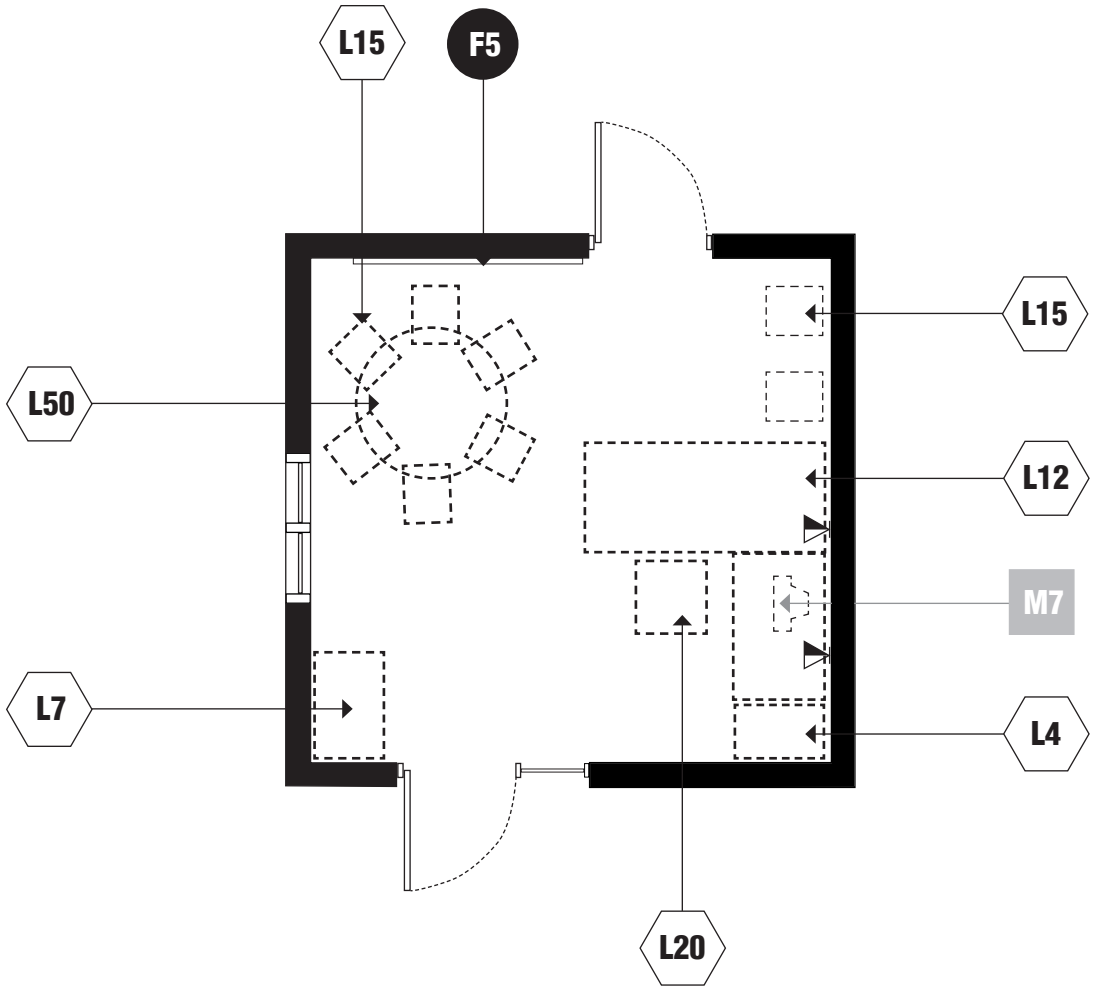
L15 guest chair

■ **miscellaneous**

M1 high speed and/or large format printers

M7 desktop computer

⚑ data drop





PKC-CF /// OFFICE SPED COORDINATOR

size

150 SF

capacity

SPED coordinator

parents and teachers

ancillary spaces

conference Room

spatial relationships

near main entry

near administrative assistant

adjacent and access to conference room

back door to secondary corridor, desirable

program activities

conferences with students, parents, teachers, staff, and visitors

curriculum development

research and planning

LEGEND ///

fixed equipment

F5 tackable/magnet wall surface

loose furnishings

L4 four-drawer file cabinet

L7 teacher's lockable wardrobe

L12 admin workstation

L15 task chair (4-6)

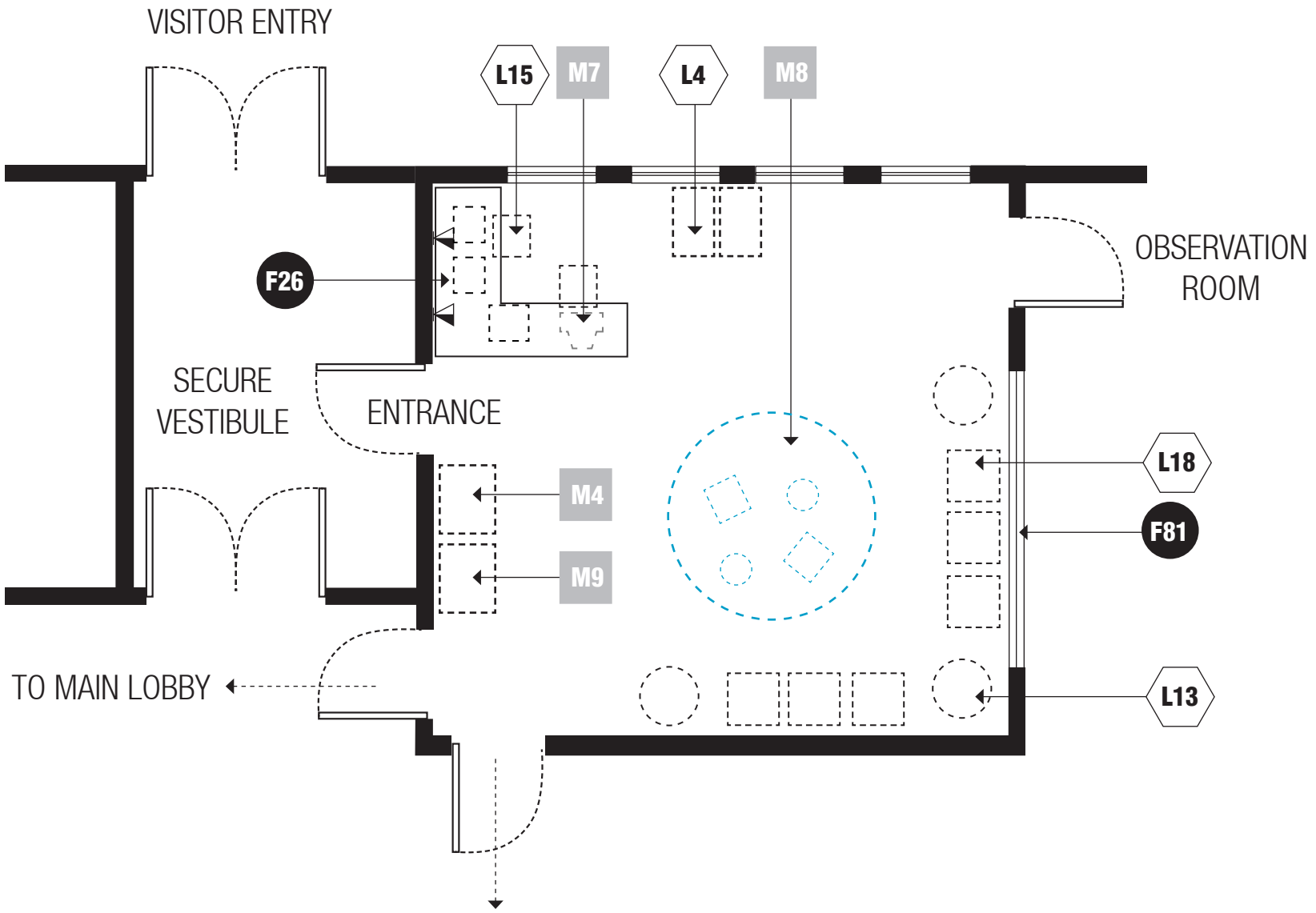
L20 executive chair

L50 small conference table

miscellaneous

M7 desktop computer

data drop



PKC-CF /// **WAITING AREA**

0’ 2’ 4’ 8’

size

300 SF

capacity

administrative assistants

visitors/parents

students

spatial relationships

see illustration opposite page

located near the main administrative area directly accessible from entry vestibule

near public restrooms

maximize views to exterior and main entry

separate visitor entry

closet (lockable)

adjacent to observation room

program activities

greeting visitors

student waiting/pick up area

workstation for administrative assistant

second and final access control point prior to accessing the main school security check-point

LEGEND ///

● **fixed equipment**

F5 tackable/magnet wall surface (8 LF)

F26 reception counter (finish carpentry)

F81 two-way mirror

⬡ **loose furnishings**

L4 four-drawer filing cabinet

L13 small table (3)

L15 task chair (2)

L18 lounge chairs (4-6)

L21 work table for check-in station

■ **miscellaneous**

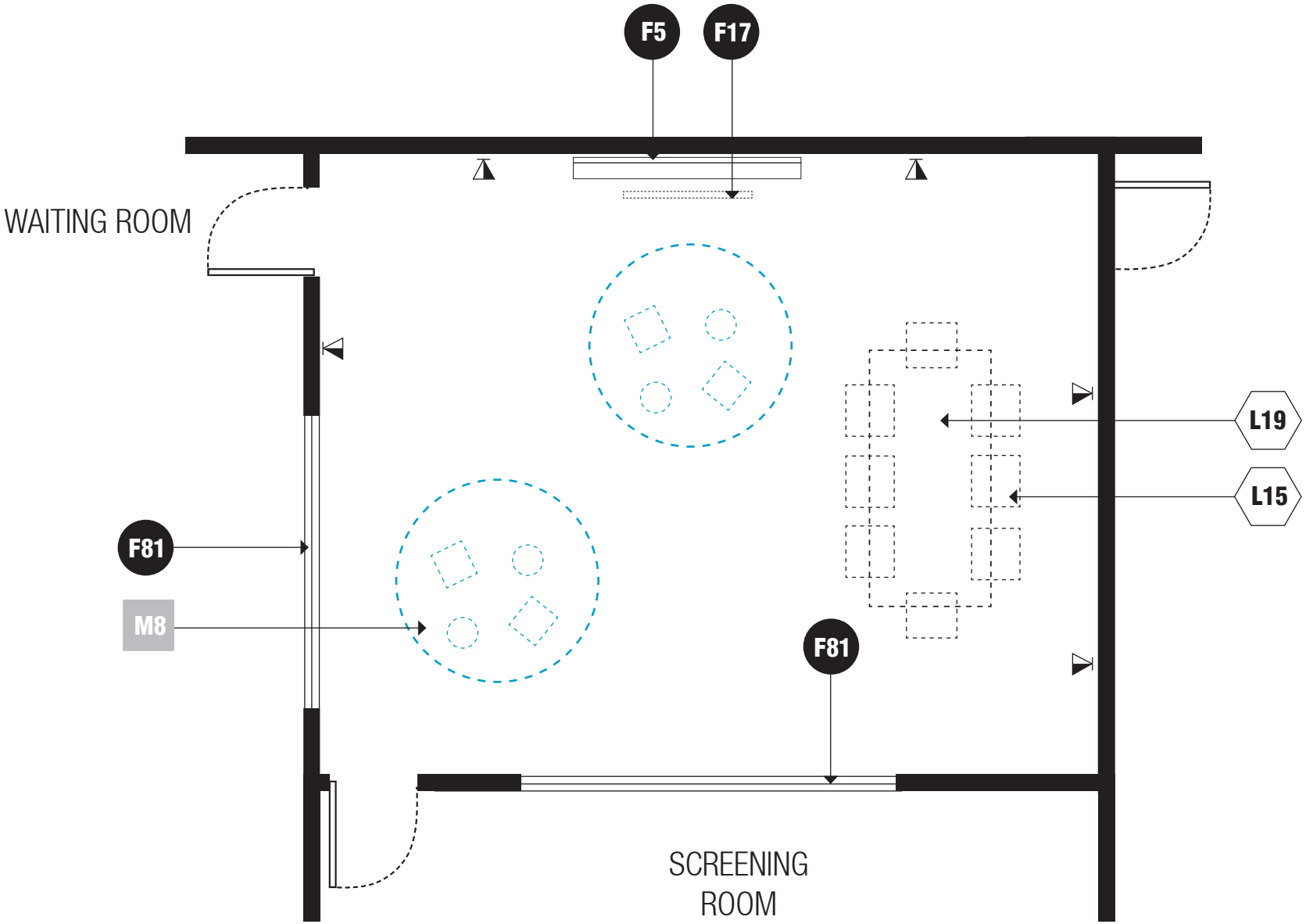
M4 large copier

M7 desktop computer

M8 childs play area

M9 large shredder

▶| data drop



PKC-CF /// **OBSERVATION ROOM**



size

400 SF

capacity

administrative staff

visitors/parents

students

spatial relationships

see illustration opposite page

located near the main administrative

near public restrooms

adjacent to waiting room and screening rooms

program activities

evaluating students

gathering point

interaction between students

LEGEND ///

fixed equipment

F5 tackable/magnet wall surface (8 LF)

F17 audio/video recording and playback equipment

F81 two way mirror

loose furnishings

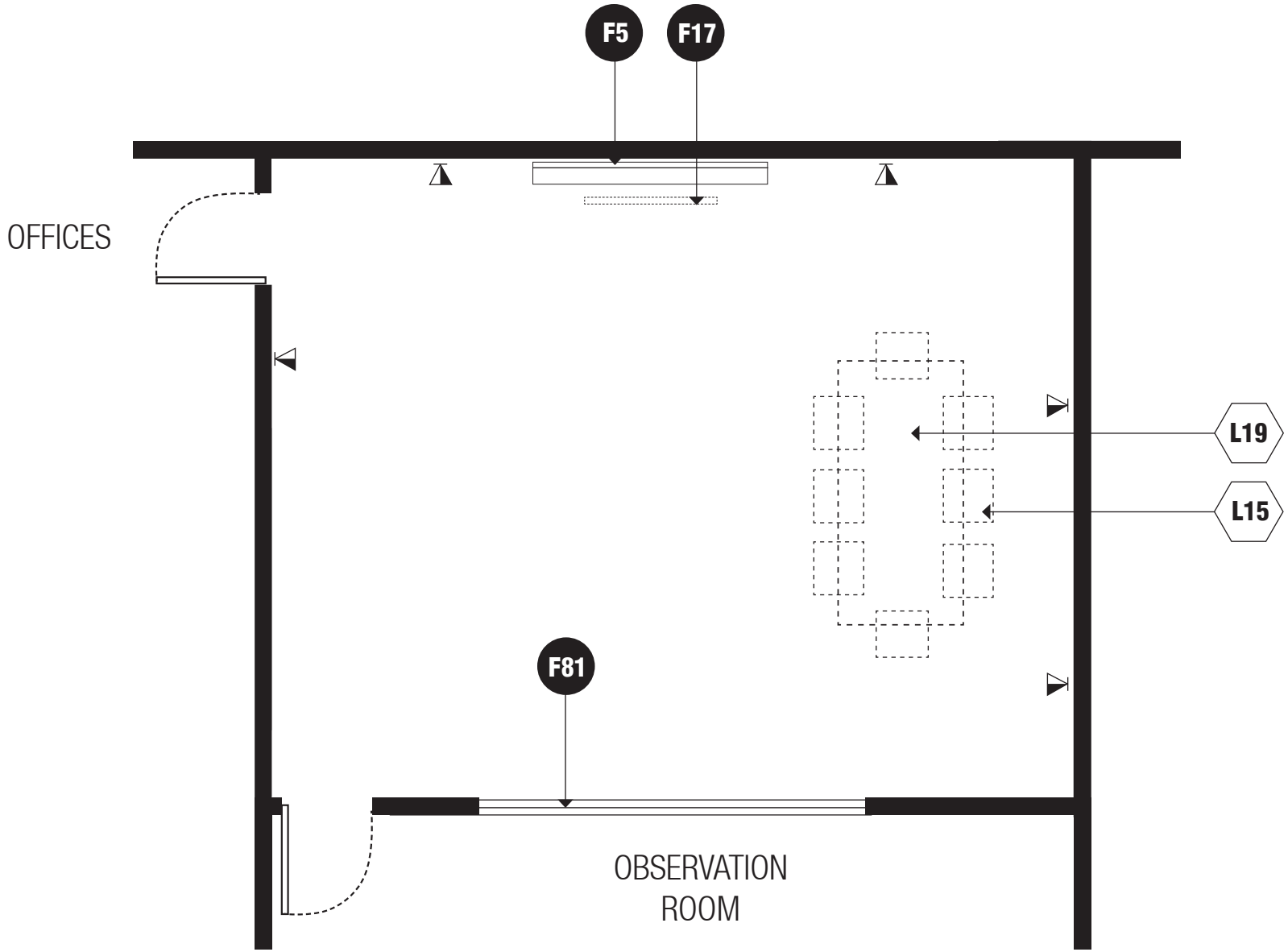
L15 task chair (2)

L19 Conference table (with table technology installations-VGA jacks, data outlets, power outlets, etc.)

miscellaneous

M8 childs play area

data drop



PKC-CF /// **SCREENING ROOM**

0’ 2’ 4’ 8’

size

400 SF

capacity

administrative staff

spatial relationships

see illustration opposite page

located near the main administrative

near public restrooms

adjacent to waiting room and observation room

program activities

evaluating students

gathering point

LEGEND ///

● **fixed equipment**

F5 tackable/magnet wall surface (8 LF)

F17 audio/video recording and playback equipment

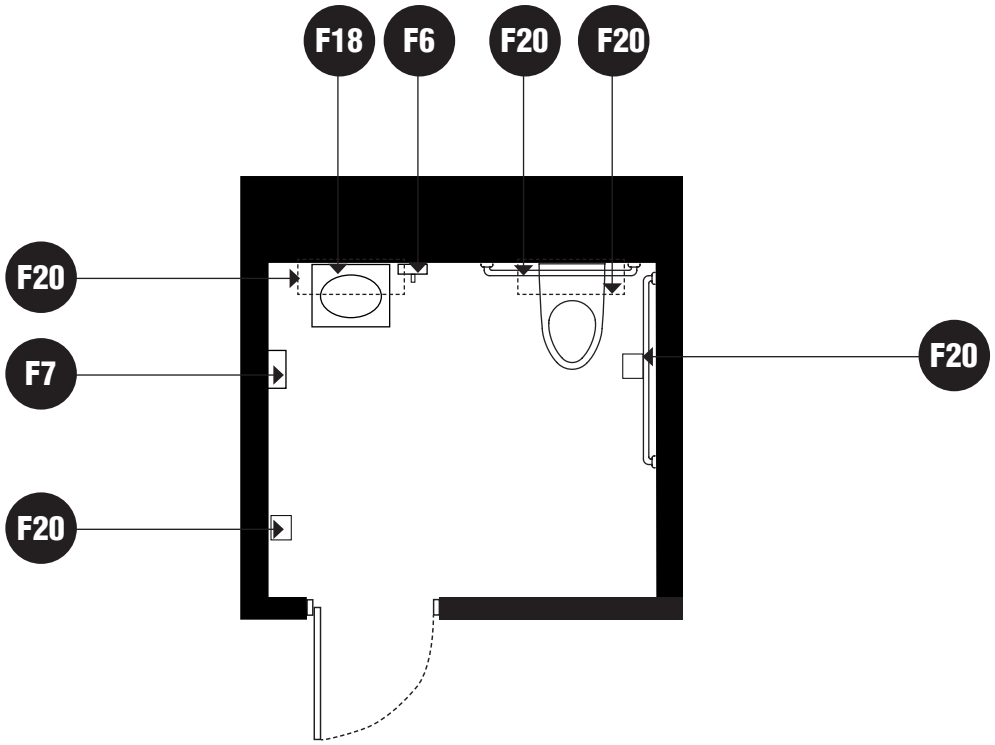
F81 two way mirror

⬡ **loose furnishings**

L15 task chair (2)

L19 Conference table (with table technology installations-VGA jacks, data outlets, power outlets, etc.)

▶| data drop





PKC-CF /// **RESTROOM**

size
50 SF
capacity
1 person
spatial relationships
near reception / waiting area
accessible from staff offices
program activities
personal and health needs for teachers, staff, and other individuals
environmental considerations
uniform lighting
environmental sound control -
wall minimum STC 53
ceiling minimum CAC 35, NRC 0.40
moisture and stain resistant finishes
finishes
flooring:
ceramic tile
base:
resilient base
optional - ceramic mosaic tile or porcelain tile
ceiling:
suspended, acoustical
walls:
painted concrete masonry units
fire suppression
fire supression system
plumbing
wall-mounted water closet
wall-mounted lavatory
plumbing connections
floor drain
HVAC
exhaust air system
supplemental heat as required
electrical
single level switching
fluorescent lighting
duplex receptacles
leveler
communications
central sound system
electronic safety and security
life safety devices per code

LEGEND ///

● **fixed equipment**

F6 soap dispenser

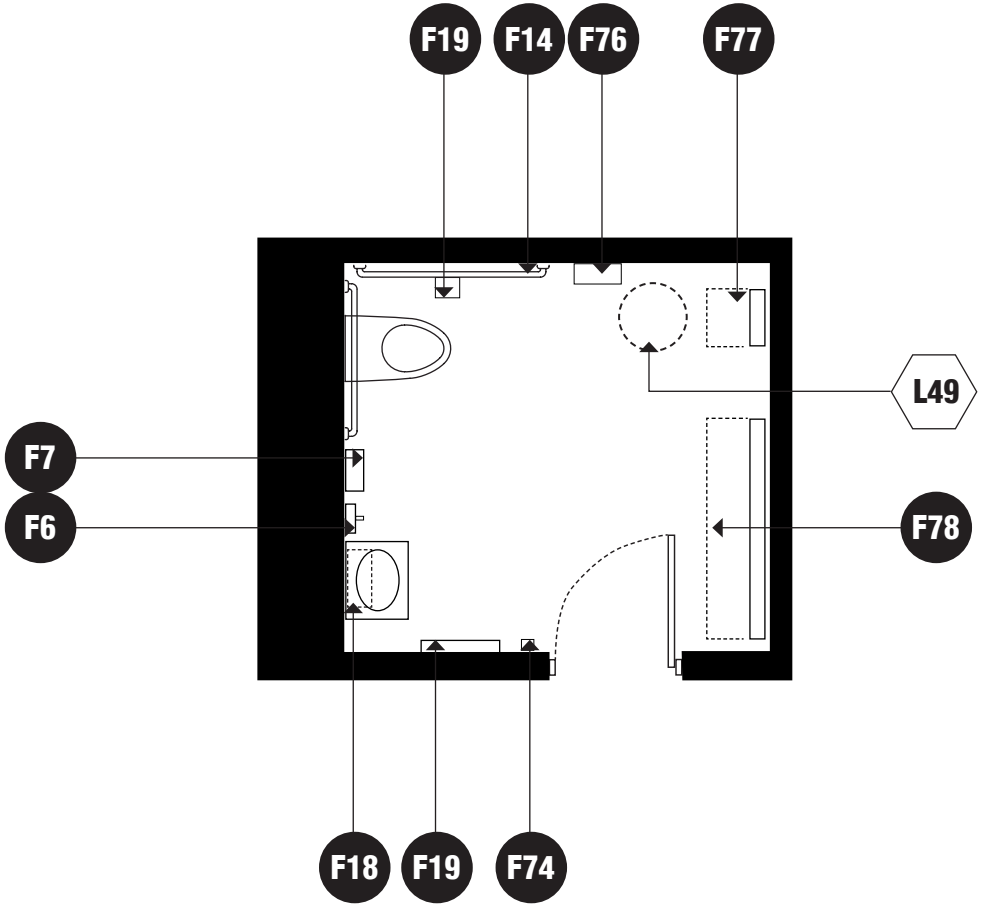
F7 towel dispenser

F18 mirror (24” x 60”)

F20 bathroom accessories

NOTES //

1. Extend walls above ceiling to deck above for security and acoustical reasons.
2. Provide staff restrooms for both men and women.
3. Each pair of staff restrooms should be distributed throughout the building at appropriate locations.





PKC-CF /// **FAMILY RESTROOM**

size
160 SF
capacity
2 people
spatial relationships
located in the administrative area, but accessible to all building occupants
program activities
personal, health, and handicap needs for all building occupants
environmental considerations
uniform lighting
environmental sound control -
wall minimum STC 53
ceiling minimum CAC 35, NRC 0.40
moisture and stain resistant finishes

finishes
flooring
ceramic tile
base
resilient base
optional - ceramic mosaic tile or porcelain tile or resinous flooring
ceiling
suspended, acoustical
walls
painted concrete masonry units
fire suppression
fire supression system

plumbing
wall-mounted water closet
wall-mounted lavatory
plumbing connections
floor drain
HVAC
exhaust air system
supplemental heat as required
electrical
single level switching
fluorescent lighting
illumination level: See Table 7600-16
(1) duplex receptacle
communications
central sound system
electronic safety and security
life safety devices per code

LEGEND ///

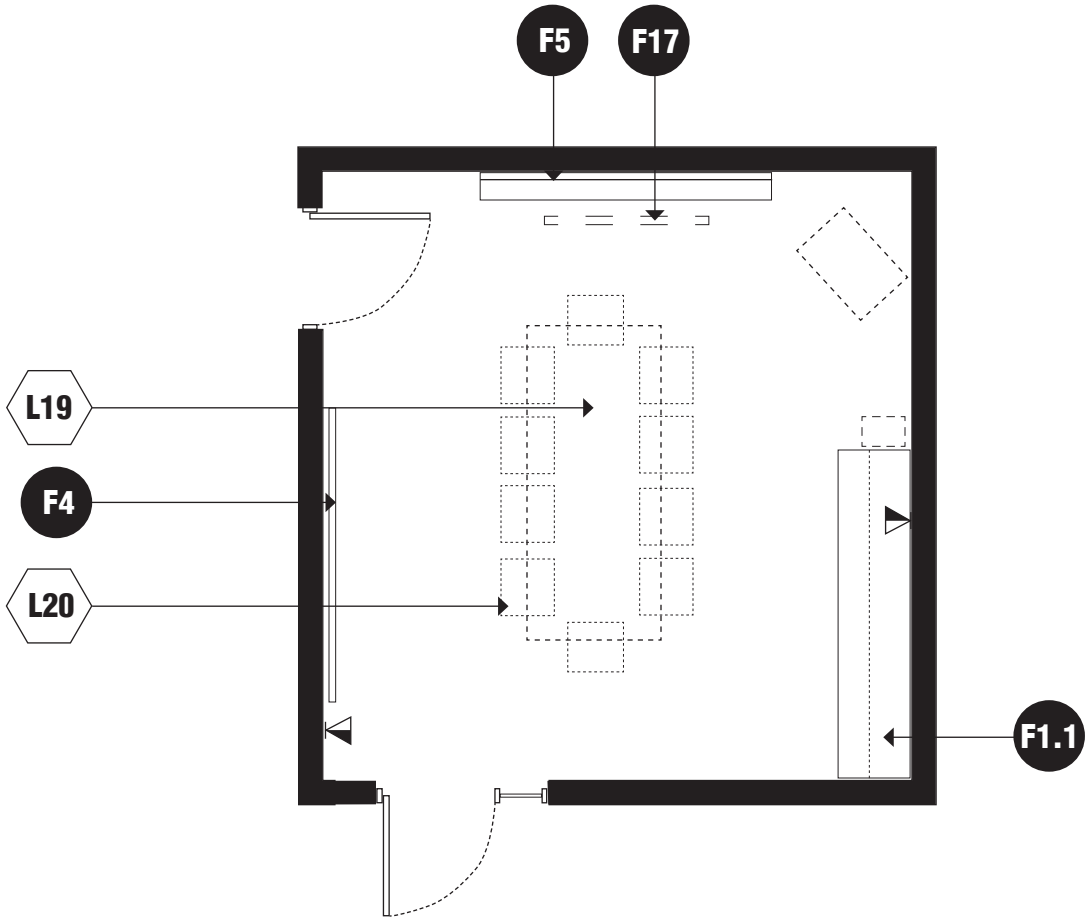
● **fixed equipment**

F7 towel dispenser
F18 24" x 60" mirror
F19 toilet tissue holder
F14 (36" and 42") grab bar
F6 soap dispenser
F76 sanitary napkin dispenser/disposal
F55 folding utility shelf
F77 mounted child seat
F78 adult/child changing station
F18 (16" x 24") mirror with shelf
F74 coat hooks

⬡ **loose furnishings**

L49 wastebasket

NOTES //
1. Finishes/features: refer to _____ for specification references.





PKC-CF /// **CONFERENCE ROOM**

size

400 SF

capacity

staff

ancillary spaces

n/a

spatial relationships

near welcome center

centrally located within administrative child find area

program activities

conferences with staff, students, parents, and visitors

LEGEND ///

● **fixed equipment**

F1.1 casework (6 LF)

F4 marker board (8 LF)

F5 tackable/magnet wall surface (8LF)

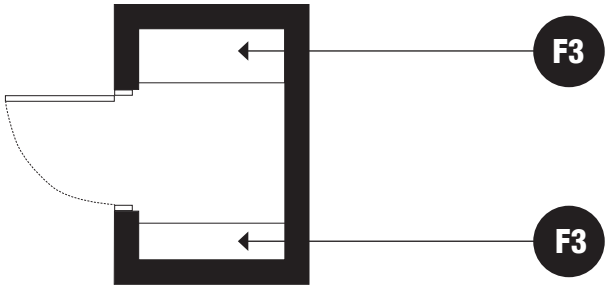
F17 audio/video recording and playback equipment

⬡ **loose furnishings**

L19 Conference table (with table technology installations-VGA jacks, data outlets, power outlets, etc.)

L20 Executive chairs (12)

data drop



size

50 SF

capacity

n/a

ancillary spaces

office/waiting area

program activities

storing of testing protocol and office supplies

security of door

LEGEND ///

● **fixed equipment**

F3 wall shelving (12” deep)

F3 wall shelving (18” deep)



PKC-CF /// **STORAGE ROOM**

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PKC-HS /// **HEALTH SUITE**

STORAGE
TOILET
COTS
OFFICE
EXAM ROOM
WAITING AREA

SPACE	QUANTITY	SF	TOTAL	NOTES
ADMINISTRATION				
Storage	1	25	25	
Toilet	1	50	50	
Cots	1	100	100	
Office	1	100	100	
Exam Room	1	100	100	
Waiting Area	1	100	100	
Total			**475**	

Comments //

The overall total for the health suite area may be + or - 10%. Some areas may be combined to facilitate circulation.

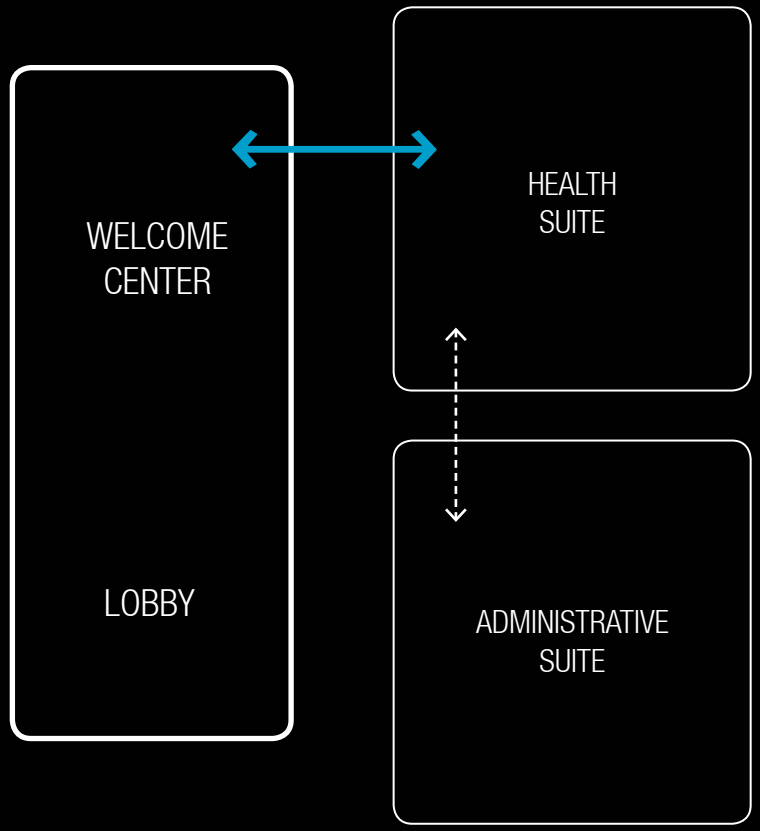
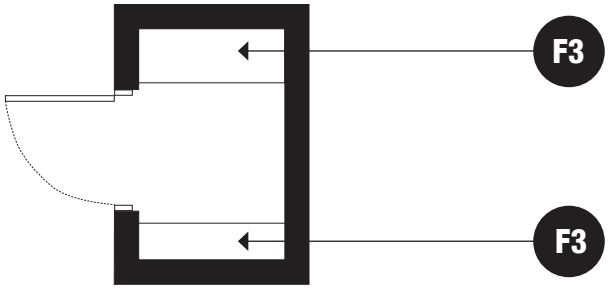


FIG. 11.0 // **HEALTH SUITE ADJACENCY DIAGRAM**



size

25 SF

capacity

staff

ancillary spaces

office/waiting area (E-AD-15)

program activities

storing chemicals, equipment, and supplies

environmental conditions

security of equipment, supplies, and medicines

security of door

LEGEND ///

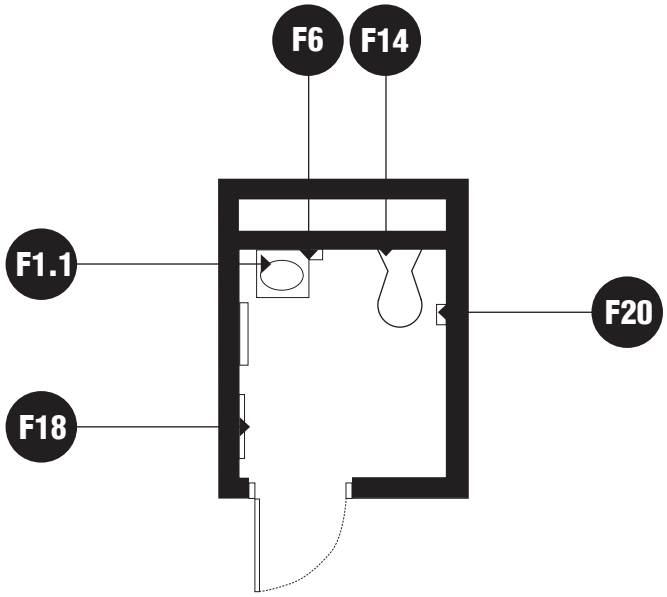
● **fixed equipment**

F3 wall shelving (12” deep)

F3 wall shelving (18” deep)



PKC-HS /// **STORAGE**



size

50 SF

capacity

staff

students

ancillary spaces

located near the cots within the health suite

plumbing

wall mounted water closet (deep well)

wall mounted lavatory

shower

plumbing connections

floor drain

LEGEND ///

fixed equipment

F1.1 casework: wall cabinet

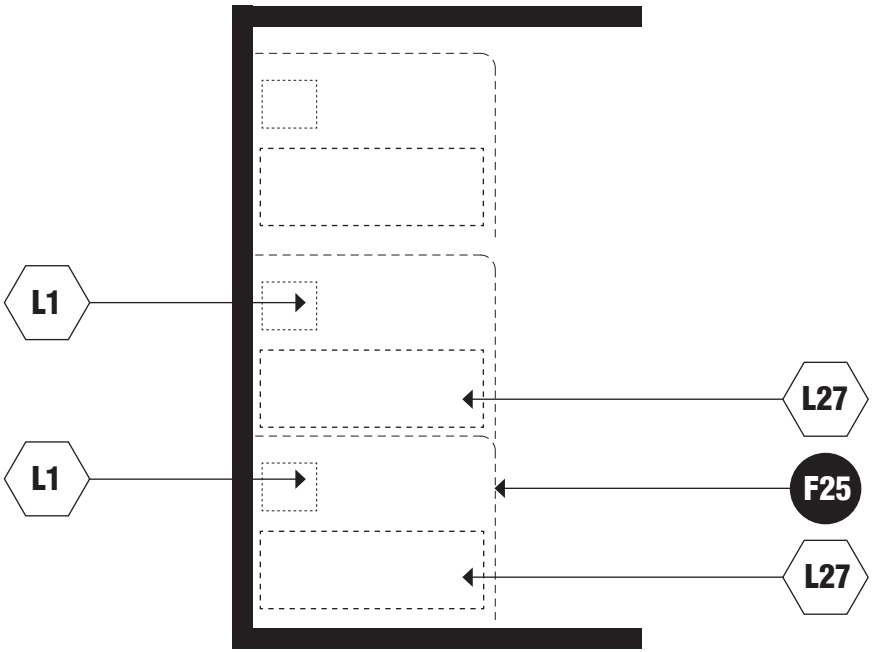
F6 soap dispenser

F18 mirror (24”x60”)

F20 bathroom accessories



PKC-HS /// **TOILET**



size

100 SF

capacity

staff

students

ancillary spaces

located near the toilet in the health suite

program activities

a resting place for students and staff

when feeling ill

LEGEND ///

● **fixed equipment**

F25 treatment cubicle curtains

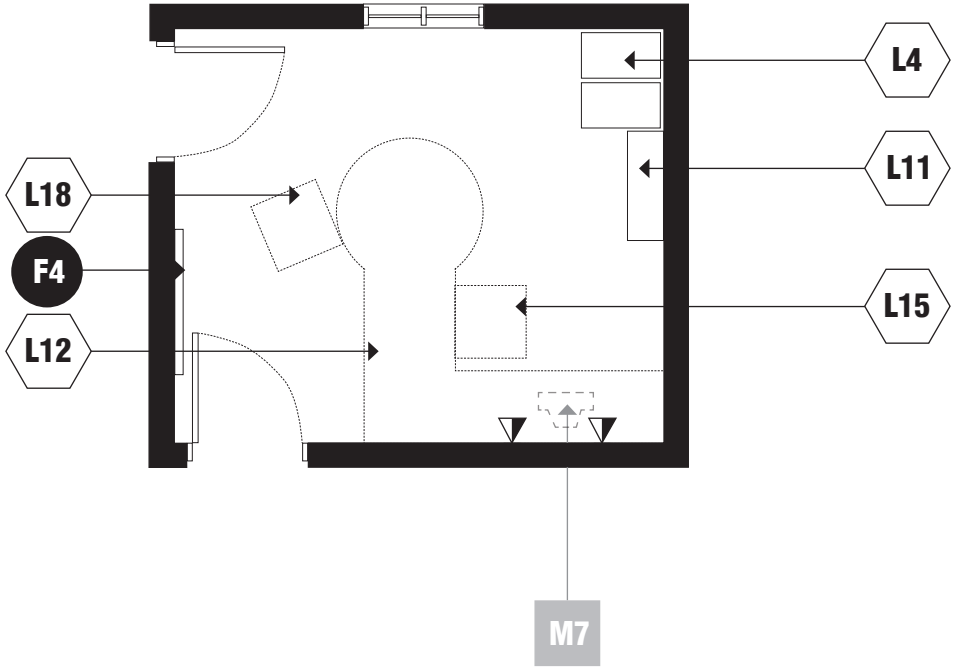
⬡ **loose furnishings**

L1 stackable/nesting chairs (2)

L27 health suite cot (2)



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PKC-HS /// **OFFICE**

size

100 SF

capacity

staff

students

parents

visitors

ancillary spaces

exam area

cots

storage

program activities

meeting area for students,parent or guardian

administrative activities by school nurse

private conversations

environmental conditions

independent temperature controls and operable window

health suites should comply with CDC requirements for number of air exchanges per hour to help prevent spreading illness

prefer not to have automated or low-flow sinks

LEGEND ///

● **fixed equipment**

F4 marker board

⬡ **loose furnishings**

L4 four-drawer file cabinet

L11 adjustable height bookshelves

L12 admin workstation

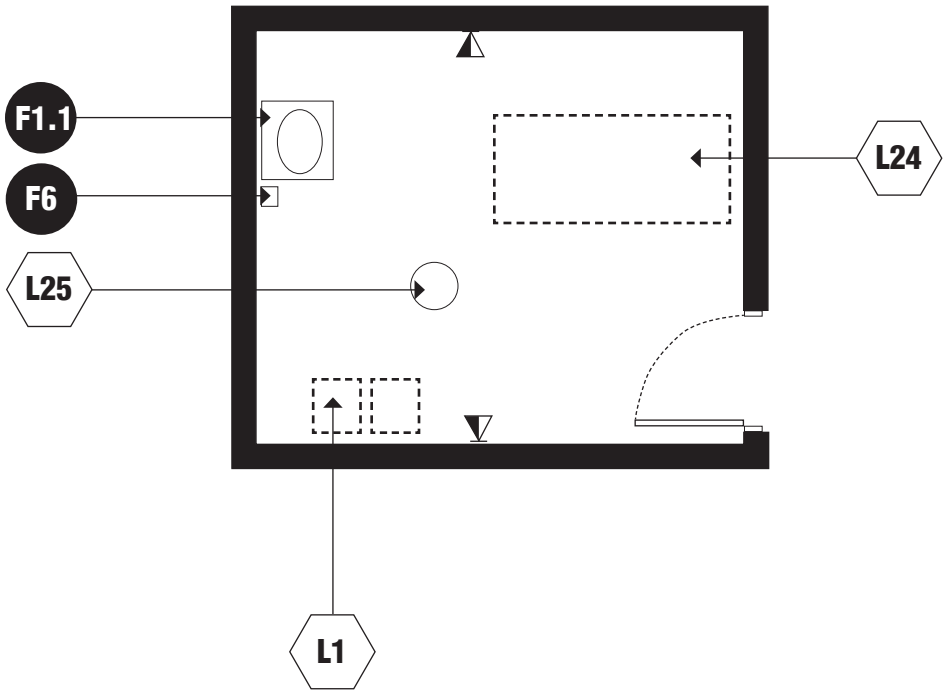
L15 task chair

L18 lounge chair

■ **miscellaneous**

M7 desktop computer

▶| data drop





PKC-HS /// **EXAM ROOM**

size

100 SF

capacity

administrative staff

students

ancillary spaces

waiting room

cots

toilet

spatial relationships

adjacent to welcome center

adjacent to administrative suite

program activities

examining

plumbing

plumbing connections:

deep sink with hands-free gooseneck

LEGEND ///

● **fixed equipment**

F1.1 casework: wall cabinet

F6 soap dispenser

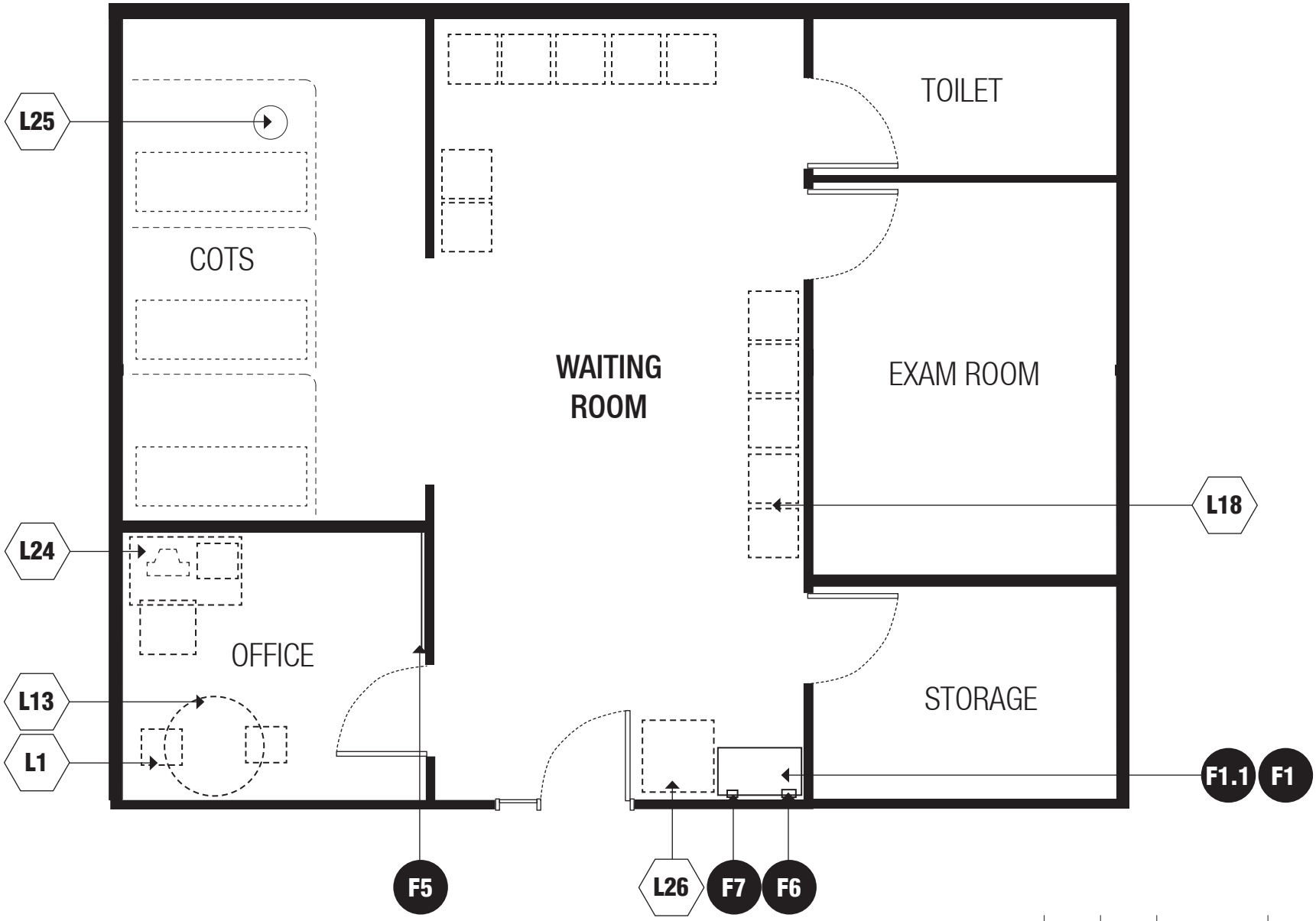
⬡ **loose furnishings**

L1 stackable/nesting chairs

L24 mobile exam table

L25 nurse stool

data drop



PKC-HS /// **WAITING AREA**

size

100 SF

capacity

1 nurse

students

ancillary spaces

nurse's office

cots

storage

toilet/shower

waiting/area

office for partners

spatial relationships

near welcome center

near lobby entrance

program activities

first aid

consultation with students

health screening

medical treatments

medication administration

student resting while awaiting pick-up by parent or guardian

environmental conditions

stain-resistant floor covering

sink with hot and cold water

adequate ventilation

visual control to office/waiting or welcome center

LEGEND ///

● **fixed equipment**

F1 base/wall cabinets and shelving (place for refrigerator connected to back-up generator

F1.1 casework (seamless, non-porous counter)

F5 tackable/magnet wall surface

F6 soap dispenser

F7 towel dispenser

F25 treatment cubicle curtain

⬡ **loose furnishings**

L1 stackable/nesting chairs (2-3)

L13 small table

L18 lounge chairs

L24 mobile exam table

L25 nurse stool

L26 refrigerator (lockable)

PKC-SD /// **STUDENT DINING**

CHAIR AND TABLE STORAGE
LOCKERS / TOILET
FOOD PREP AREA
FOOD SERVICE OFFICE
SERVING AREA
DRY FOOD STORAGE
FREEZER / COOLER
WARE WASHING
CLEANING STORAGE

SPACE	QUANTITY	SF	TOTAL	NOTES
DINING AND SCHOOL NUTRTION SERVICES				
Chair and Table Storage	1	225	225	
Lockers / Toilet	1	200	200	
Food Prep Area	1	650	650	
Food Service Office	1	100	100	
Serving area	1	500	500	
Dry Food Storage	1	300	300	
Freezer / Cooler	1	300	300	
Ware Washing	1	200	200	
Cleaning Storage	1	50	50	
Total			**2,525**	

Comments //

The overall total area may be + or – 10%. The existing dining area and the kitchen are undersized for the proposed capacity. If these spaces are replaced, the school would like to keep the current dining as a multi-purpose area if feasible. If this area is expanded, the room should be dividable.

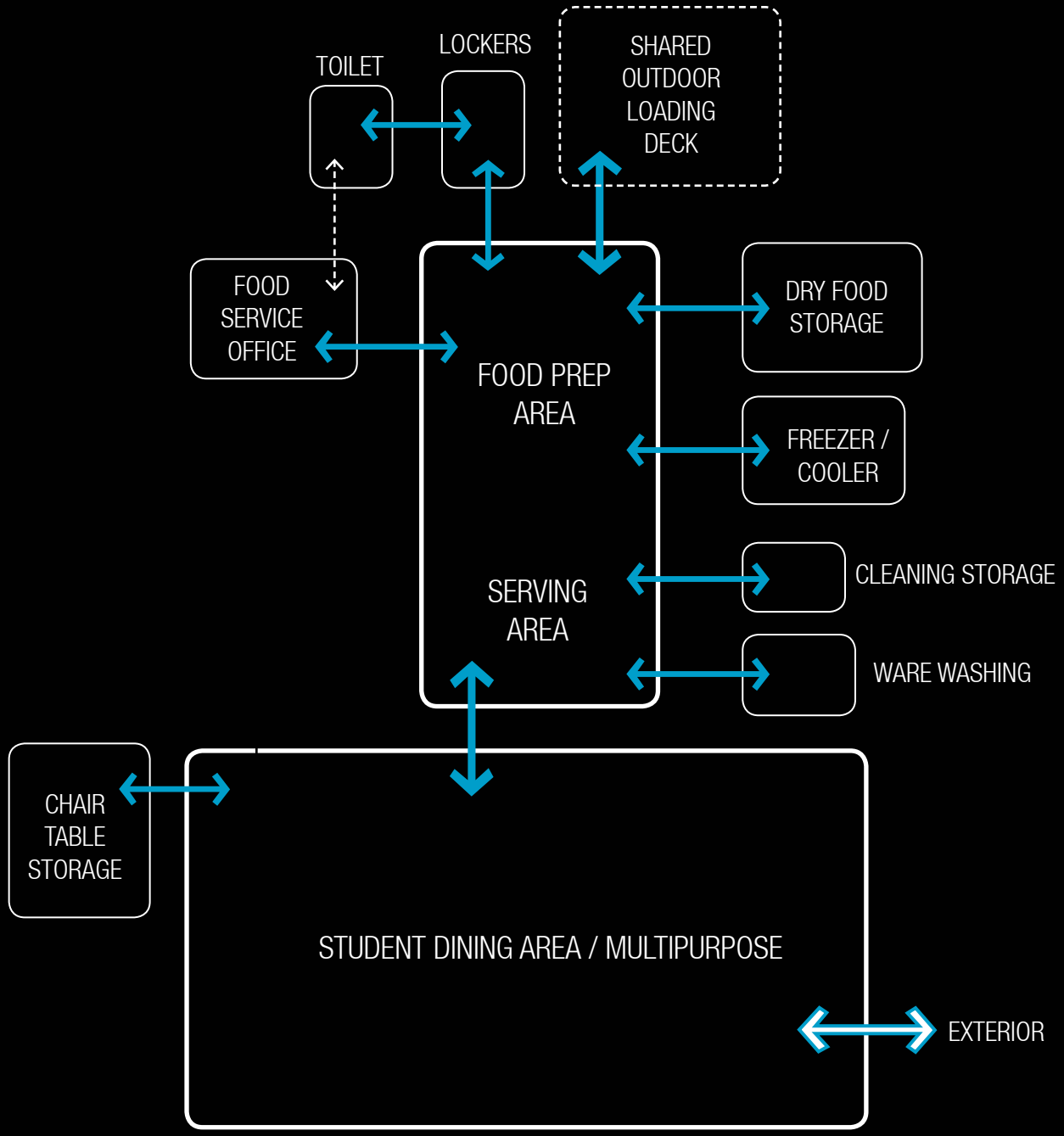
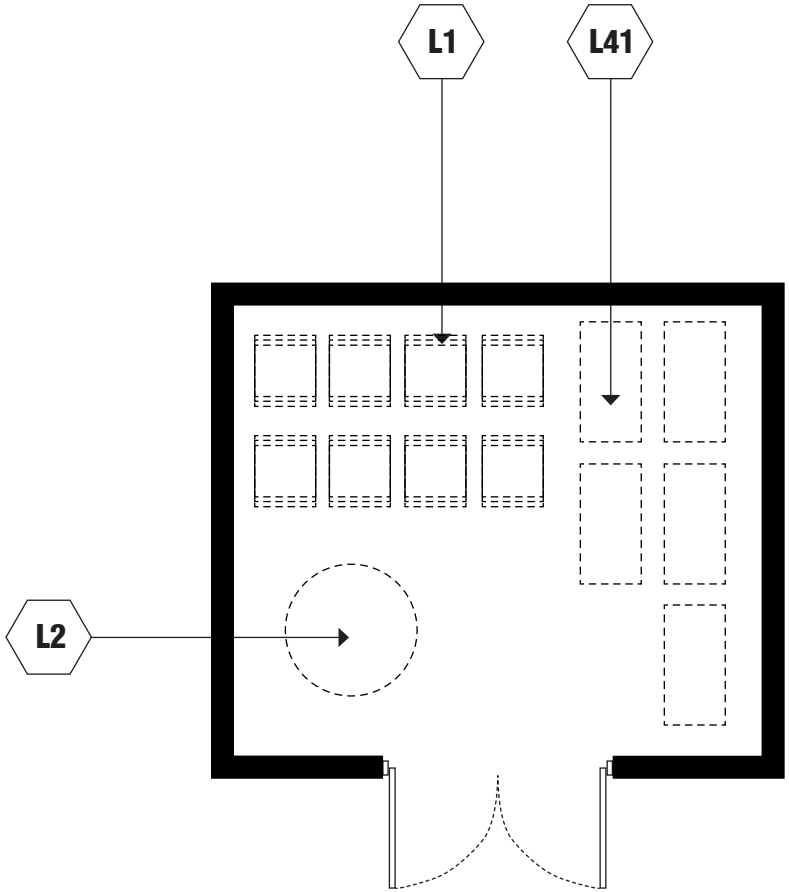


FIG. 12.0 // **STUDENT DINING ADJACENCY DIAGRAM**



size

50 SF

capacity

n/a

ancillary spaces

student dining area / multipurpose

spatial relationships

adjacent and access to student dining area / multipurpose

may provide back of stage access

program activities

storage

environmental considerations

uniform lighting

cleanable and resilient building surfaces

accessibility for moving furniture in and out

LEGEND ///

loose furnishings

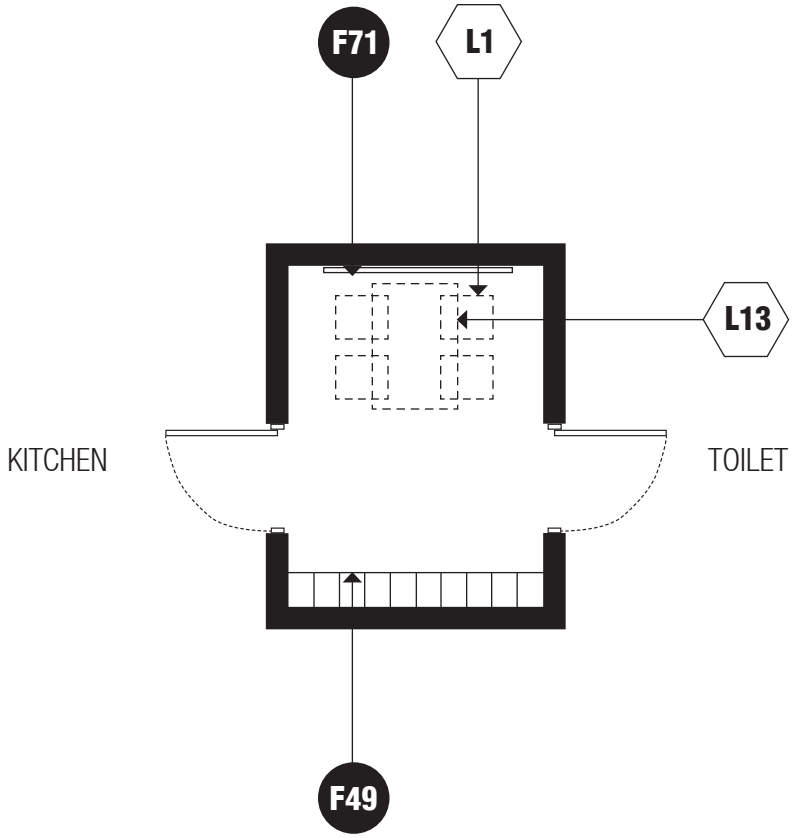
L1 stackable/nesting chairs (stacked)

L2 stackable/nesting tables (stacked)

L41 chair dollies



PKC-SD /// CHAIR AND TABLE STORAGE



size

200 SF

capacity

food service personnel

ancillary spaces

kitchen

program activities

space for the storage of towels, aprons, etc.

space to allow food staff personnel to take breaks

LEGEND ///

● **fixed equipment**

F49 lockers

F71 tack board (4 LF)

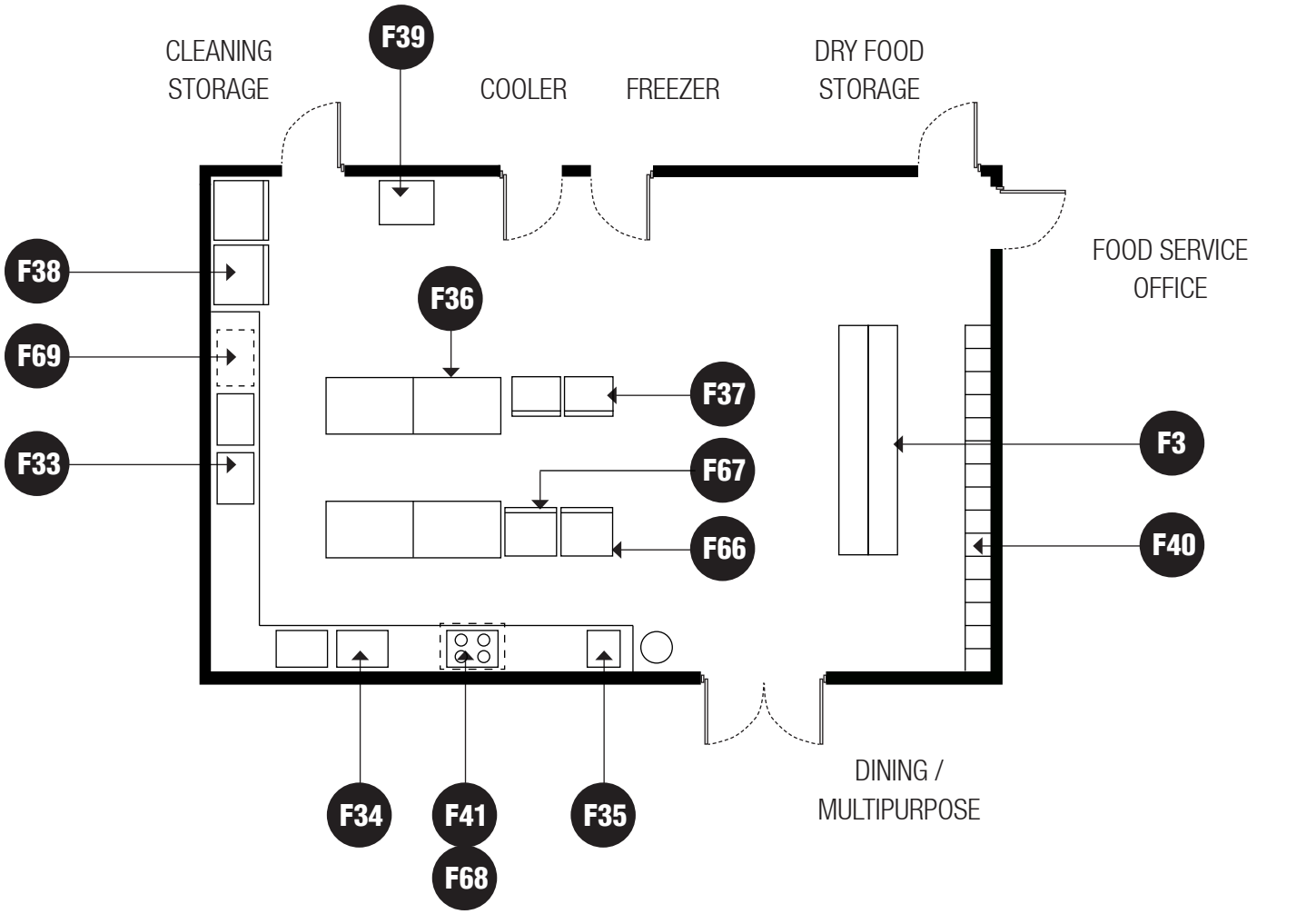
⬡ **loose furnishings**

L1 stackable/nesting chairs (4-6)

L13 small table



PKC-SD /// **LOCKERS / TOILET**



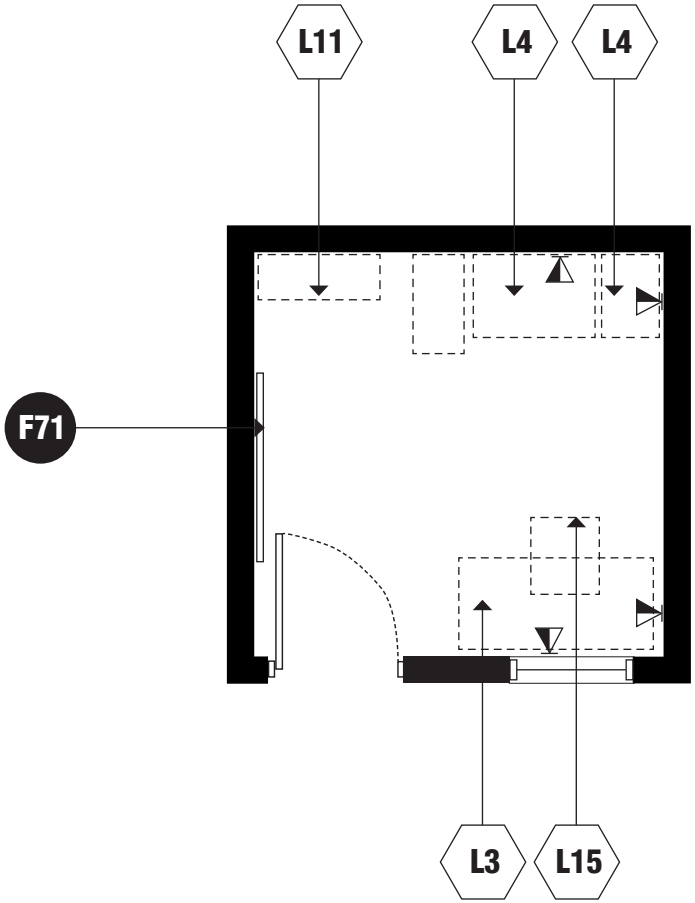
PKC-SD /// **FOOD PREP AREA**

size
650 SF
capacity
staff
ancillary spaces
kitchen
spatial relationships
adjacent to student dining area
multipurpose
open to serving area
program activities
prepare food
environmental considerations
uniform lighting
proper ventilation of space to remove cooking odors
cleanable building surfaces
electrical/plumbing / mechanical connections for food service equipment

finishes
flooring
easy clean, non-slip flooring - single surface
poured or rolled flooring
base
resilient base
ceiling
cleanable, suspended, acousticac
walls
epoxy-painted concrete masonry units
plumbing
connections to food service equipment
plumbing and gas connections
hand-washing lavatory
floor drains
food preparation sink with adjacent trash bin
HVAC
supply/return air system
independent temperature control
kitchen canopy exhaust system
air conditioning
electrical
duplex receptacles
connections to food service equipment
single-level switching
clock
central sound system

LEGEND ///

● **fixed equipment**
F3 storage shelving
F33 pot-washing sinks
F34 food preparation sinks
F35 hand sinks with adjacent trash bin
F36 work tables
F37 warming/holding/cabinets
F38 refrigeration/reach-ins
F39 mop washing sink
F40 lockable chemical storage
F41 exhaust hood systems, including fire suppression
F66 combi oven
F67 convection steamer
F68 range, with oven
F69 ware washing machine with appropriate accessories (tables, booster heater, disposer, etc.)



size

100 SF

capacity

food service manager

food service staff

ancillary spaces

kitchen

program activities

scheduling

staff evaluations/discipline/meetings

LEGEND ///

● **fixed equipment**

F71 tack board (4 LF)

⬡ **loose furnishings**

L3 desk

L4 four-drawer file cabinet

L15 ergonomic task chair

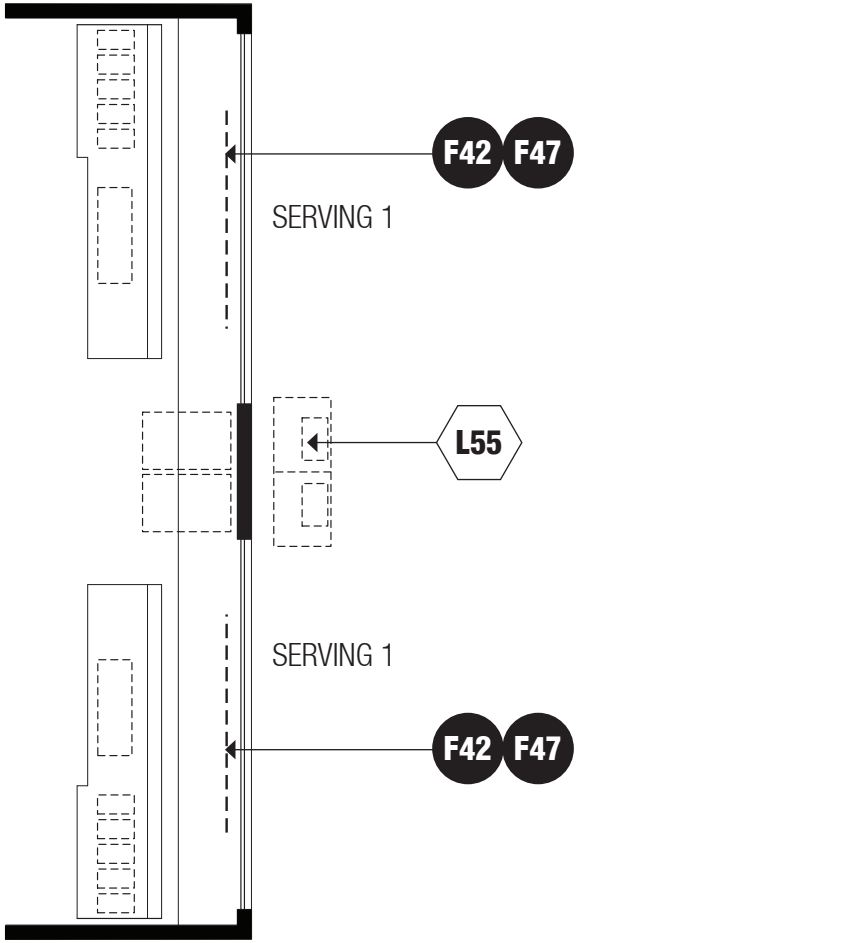
L11 adjustable height bookshelves (12 LF)

▶ data drop



PKC-SD /// FOOD SERVICE OFFICE

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PKC-SD /// **SERVING AREA**

size

500 SF

capacity

students

staff

community

ancillary spaces

student dining area / multipurpose

kitchen

spatial relationships

within student dining area / multipurpose or food preparation area

beginning of serving line should be near entry door of students dining area / multipurpose

open to food preparation area

program activities

serve food

*serving line configuration and design will be determined in consultation with School Nutrition Services

LEGEND ///

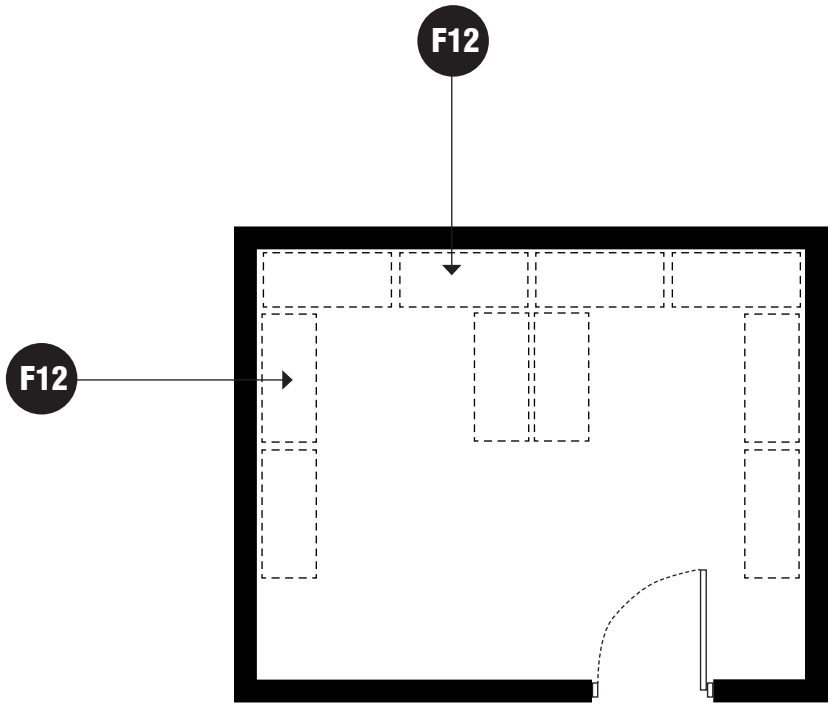
● **fixed equipment**

F42 drop-in individually controlled heated electric food wells and full service sneeze guard (student height) with over shelf

F47 drop-in self-contained refrigerated cold pan for side items (counter and sneeze guards are lower than normal for better viewing and service to elementary students)

⬡ **loose furnishings**

L55 milk coolers



size

300 SF

capacity

n/a

spatial relationships

near supply storage/receiving

adjacent and access to food prep area

program activities

storage

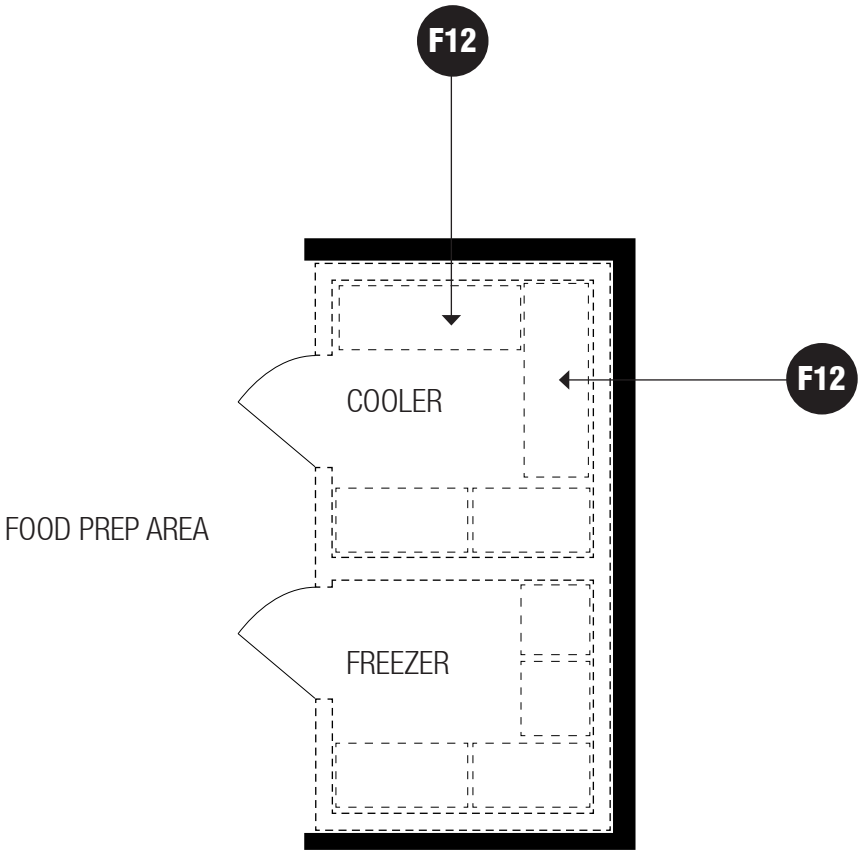
LEGEND ///

● **fixed equipment**

F12 rust-resistant shelving and dunnage racks (24” deep)



PKC-SD /// DRY FOOD STORAGE



size

300 SF

capacity

n/a

ancillary spaces

kitchen

spatial relationships

adjacent and access to food prep area

near the supply storage/receiving

environmental considerations

ventilation for refrigeration machinery equipment

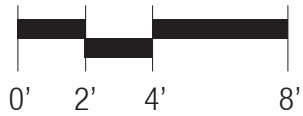
floor to be flush with adjacent kitchen floor

electrical service for refrigeration equipment

LEGEND ///

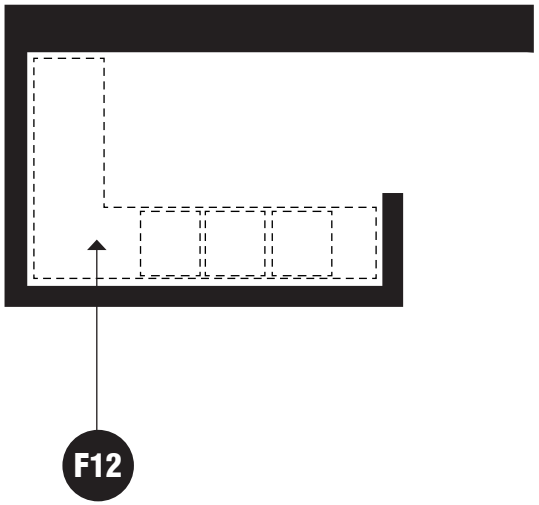
● **fixed equipment**

F12 rust-resistant shelving and dunnage racks (24” deep)



PKC-SD /// **FREEZER / COOLER**

STUDENT DINING /
MULTIPURPOSE



NOTE //
This is an example of a ware washing area. Food service equipment will vary from school to school; confirm requirements with ACPS Food Service Department.

PKC-SD /// WARE WASHING

size
200 SF

capacity
n/a

ancillary spaces
kitchen

spatial relationships
pass-through into student dining area/ multipurpose for tray drop-off
adjacent and access to food prep area

environmental considerations
proper ventilation of space to remove steam and condensation
cleanable building surfaces

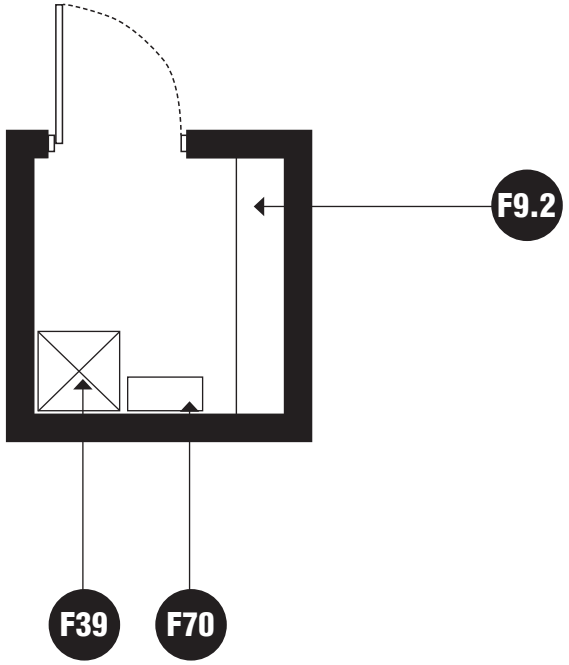
plumbing
connections to food service equipment
three compartment sink
floor drain

LEGEND ///

● **fixed equipment**

F12 rust resistant shelving and dunnage racks (24" deep)





size

50 SF

capacity

food service staff

ancillary spaces

kitchen

spatial relationships

adjacent and access to kitchen

program activities

storing chemicals and equipment

environmental considerations

cleanable building surfaces

sensors for spilled chemicals

adequate exhaust/ventilation

LEGEND ///

fixed equipment

F9.2 rust resistant shelving

F39 mop sink

F70 mop rack



PKC-SD /// **CLEANING STORAGE**

PKC-BA /// **BEFORE-AFTER SCHOOL**

OFFICE/STORAGE (OPTIONAL)
PLAYGROUP SPACE

SPACE	QUANTITY	SF	TOTAL	NOTES
ADMINISTRATION				
Office/Storage (OPTIONAL)	--	250	--	
Play Group Space	1	500	500	
Total			**500**	

Comments //

The overall total for the before-after school program area may be + or - 10%.

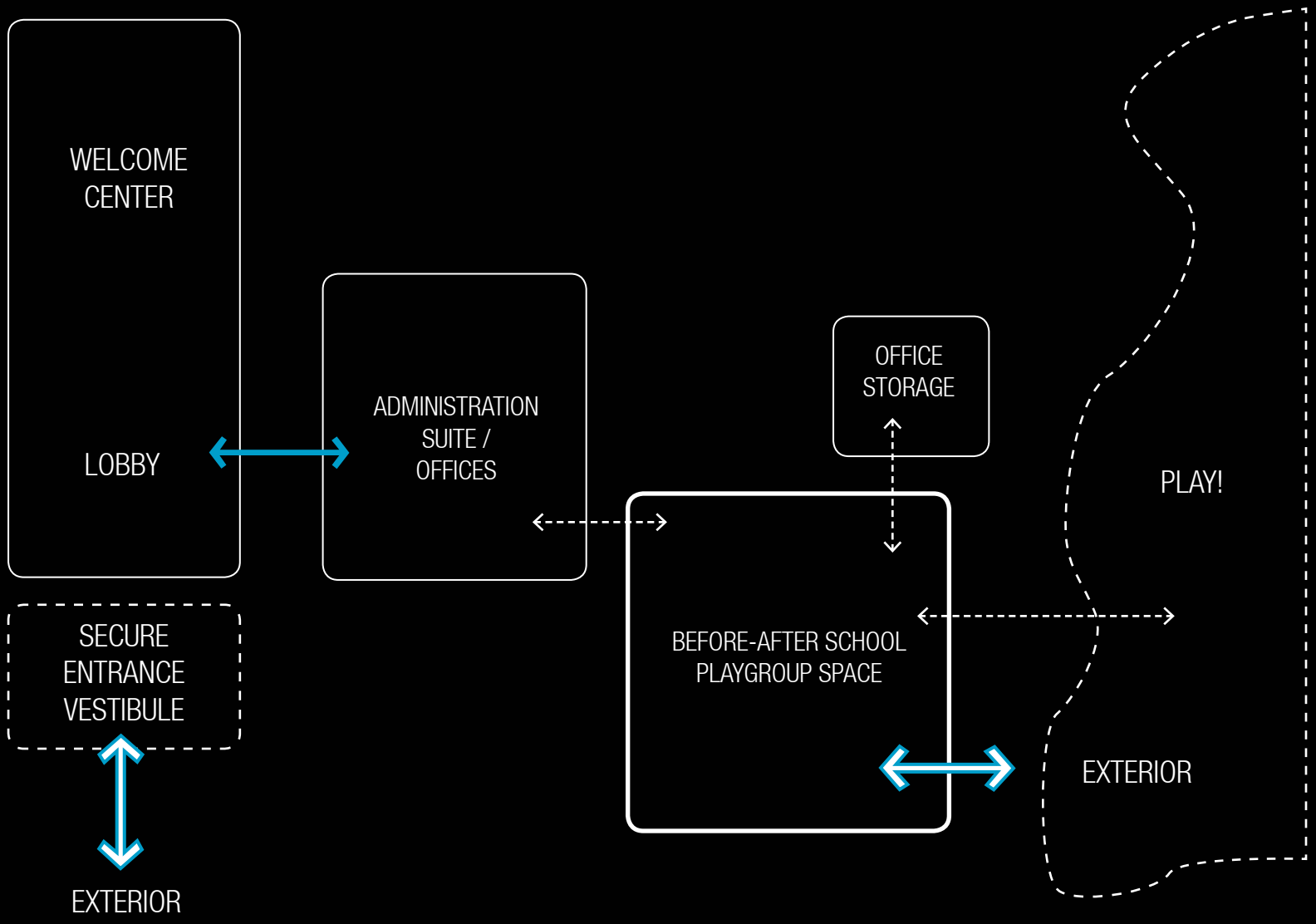
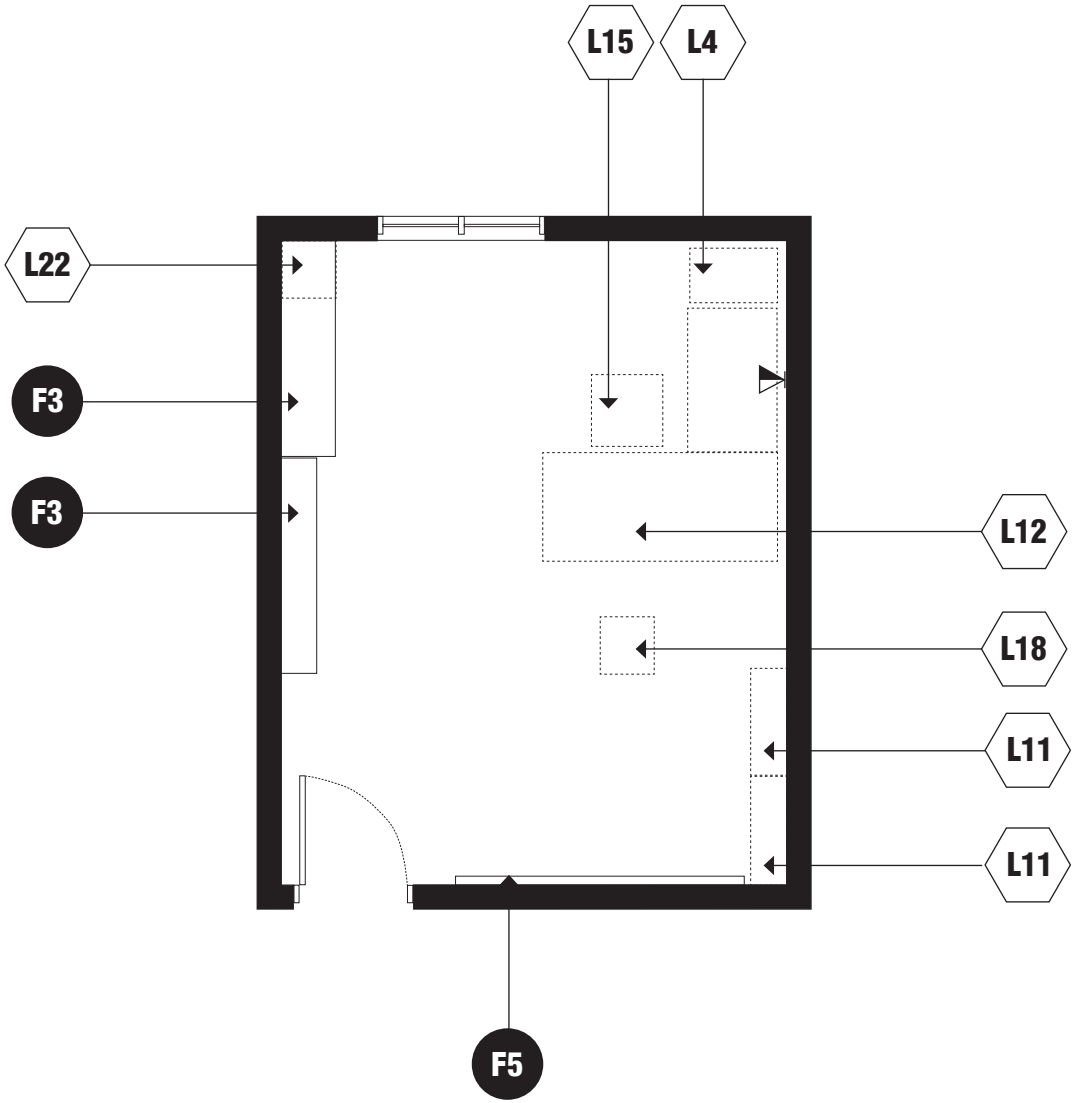


FIG. 13.0 // **BEFORE-AFTER SCHOOL ADJACENCY DIAGRAM**





PKC-BA /// **OFFICE AND STORAGE**

size

250 SF

capacity

staff

coordinators of after school program

parents/volunteers

spatial relationships

near public use spaces

near Gymnasium and student dining area/multipurpose

access to main corridor

near FACE center

program activities

administrative duties

storing and retrieving supplies and equipment

teaching/tutoring and counseling

LEGEND ///

● **fixed equipment**

F3 wall shelving (12” deep)

F3 wall shelving (18” deep)

F5 tackable/magnet wall surface (8 LF)

⬡ **loose furnishings**

L4 four-drawer file cabinet

L11 adjustable height bookshelves

L12 admin workstation

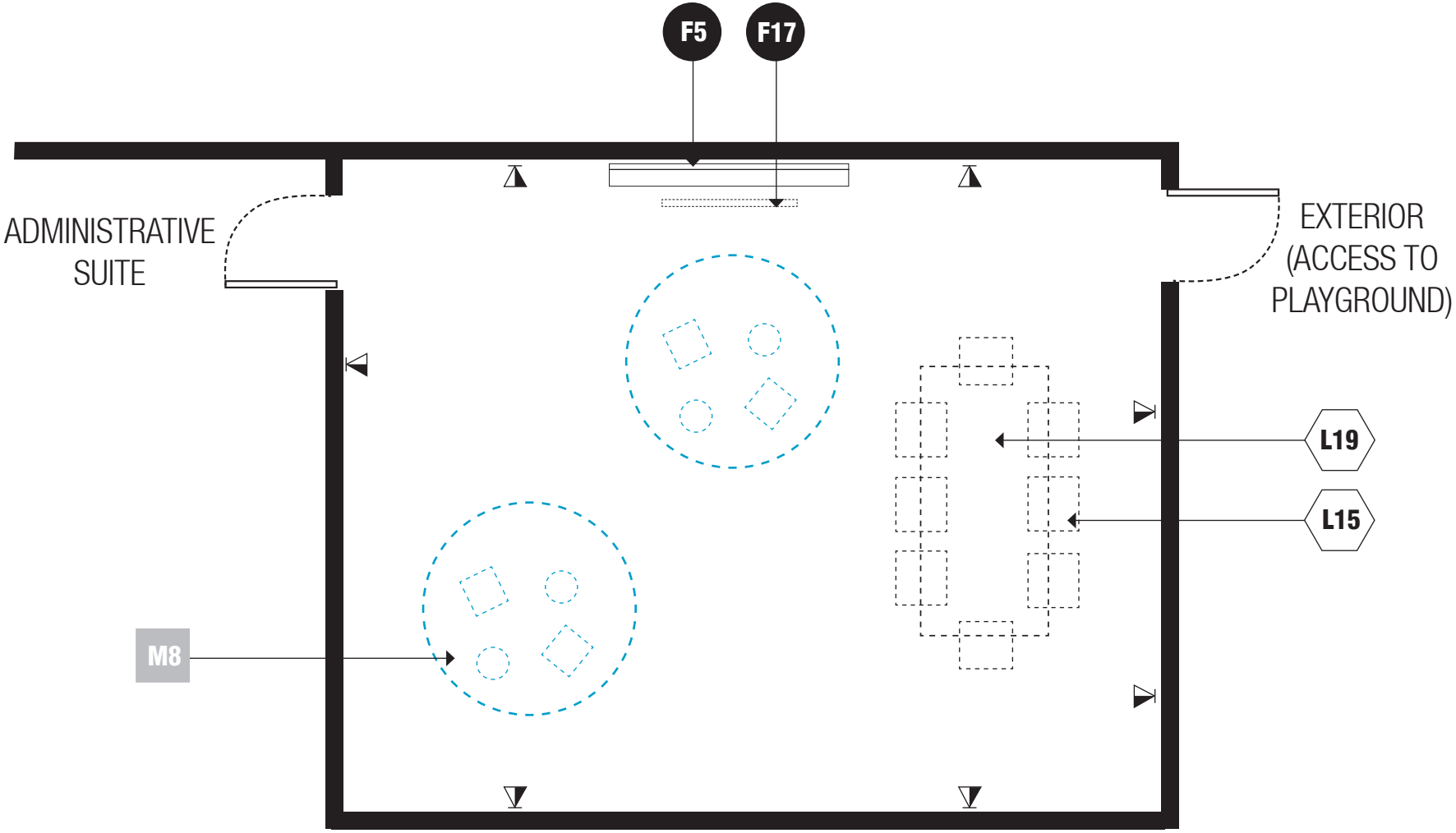
L15 task chair

L18 lounge chair

L22 safe

▶| data drop

note: consult caregiver on the quantity of storage. larger spaces should be outfitted like a standard classroom (white board, tack board, technology)



PKC-BA /// **PLAYGROUP SPACE**

0’ 2’ 4’ 8’

size

500 SF

capacity

administrative staff

visitors/parents

students

spatial relationships

see illustration opposite page

located near the main administrative

near public restrooms

direct public access from exterior

exit to playground is preferable

program activities

gathering point

interaction between students

LEGEND ///

● **fixed equipment**

F5 tackable/magnet wall surface (8 LF)

F17 audio/video recording and playback equipment

⬡ **loose furnishings**

L15 task chair (2)

L19 Conference table (with table technology installations-VGA jacks, data outlets, power outlets, etc.)

■ **miscellaneous**

M8 childs play area

▶| data drop

PKC-EC /// **MAINTENANCE & CUSTODIAL**

SUPPLY STORAGE/RECEIVING
TOILET/SHOWER/LOCKERS
CUSTODIAL OFFICE
LOADING DOCK/CENTRAL RECEIVING

SPACE	QUANTITY	SF	TOTAL	NOTES
BUILDING ENGINEERING				
Supply Storage/Receiving	1	500	500	
Toilet/Showers/Lockers	2	100	200	
Custodial Office	1	150	150	
Loading Dock/Central Receiving	1	150	150	
Total			**1,000**	

Comments //

Provide one custodial closet per floor, regardless of facility capacity.

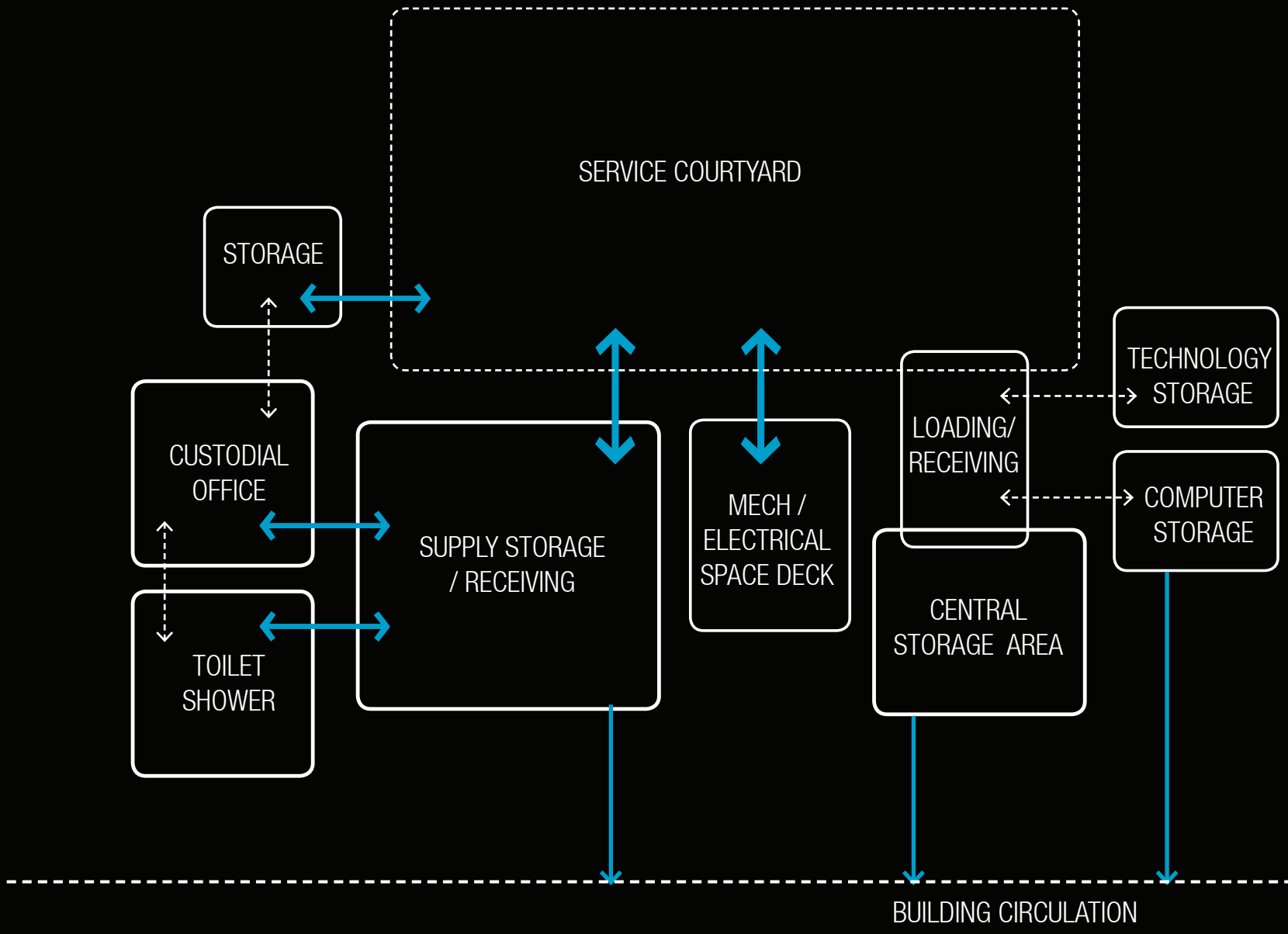
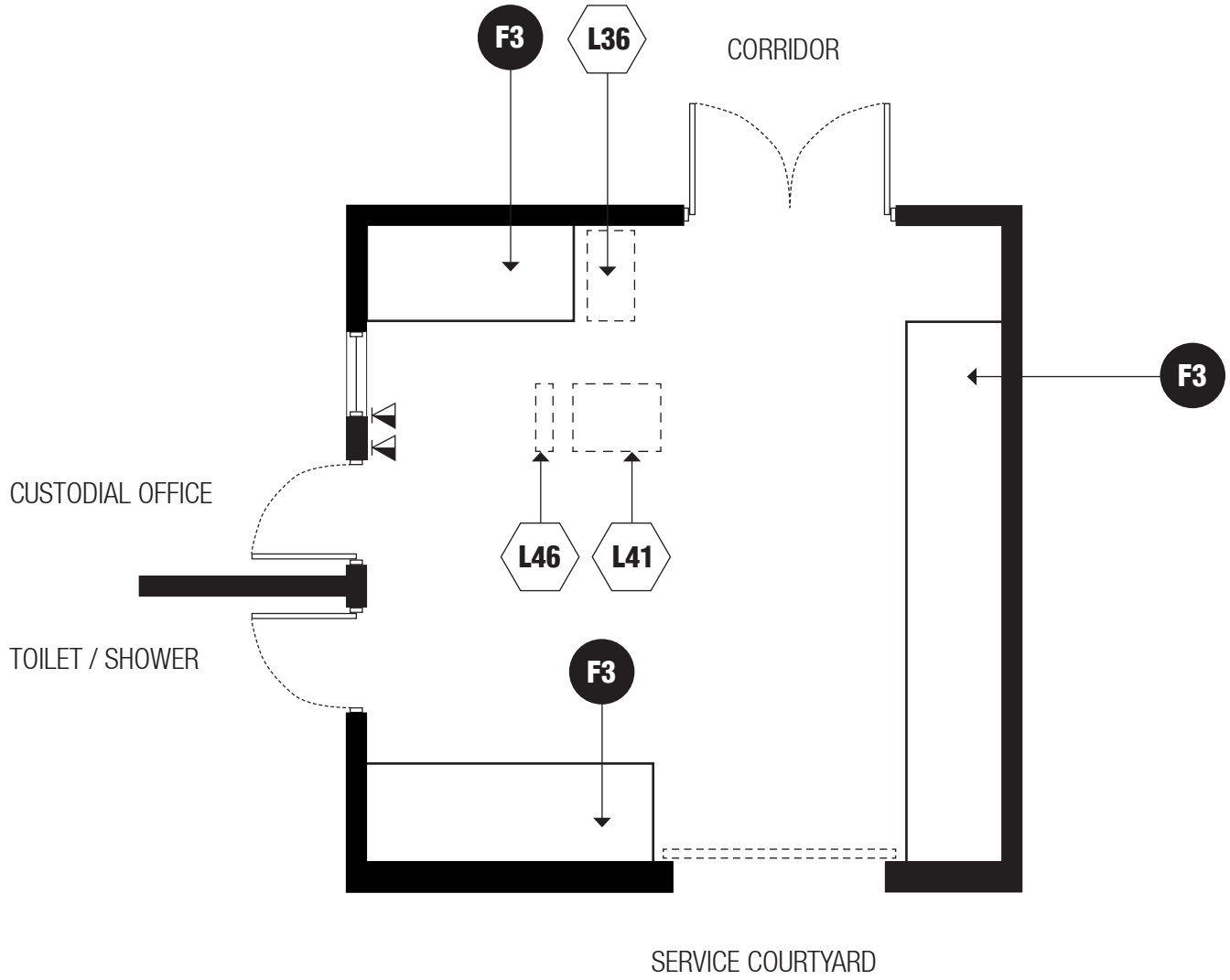


FIG. 14.0 // **MAINTAINENCE & CUSTODIAL ADJACENCY DIAGRAM**





PKC-EC /// **SUPPLY STORAGE / RECEIVING**

size

500 SF

capacity

maintainence personnel

spatial relationships

adjacent and access to loading dock area and service courtyard

access to corridor

adjacent and access to custodial office

adjacent and access to toilet/shower/ locker room

program activities

loading and unloading

storage of furniture, materials for special events, paper, and general supplies

plumbing

plumbing connections service sink

environmental considerations

supplemental heating source

double door with removable mullions

overhead door to service courtyard

LEGEND ///

● **fixed equipment**

F3 wall shelving (84" high x 36" deep)

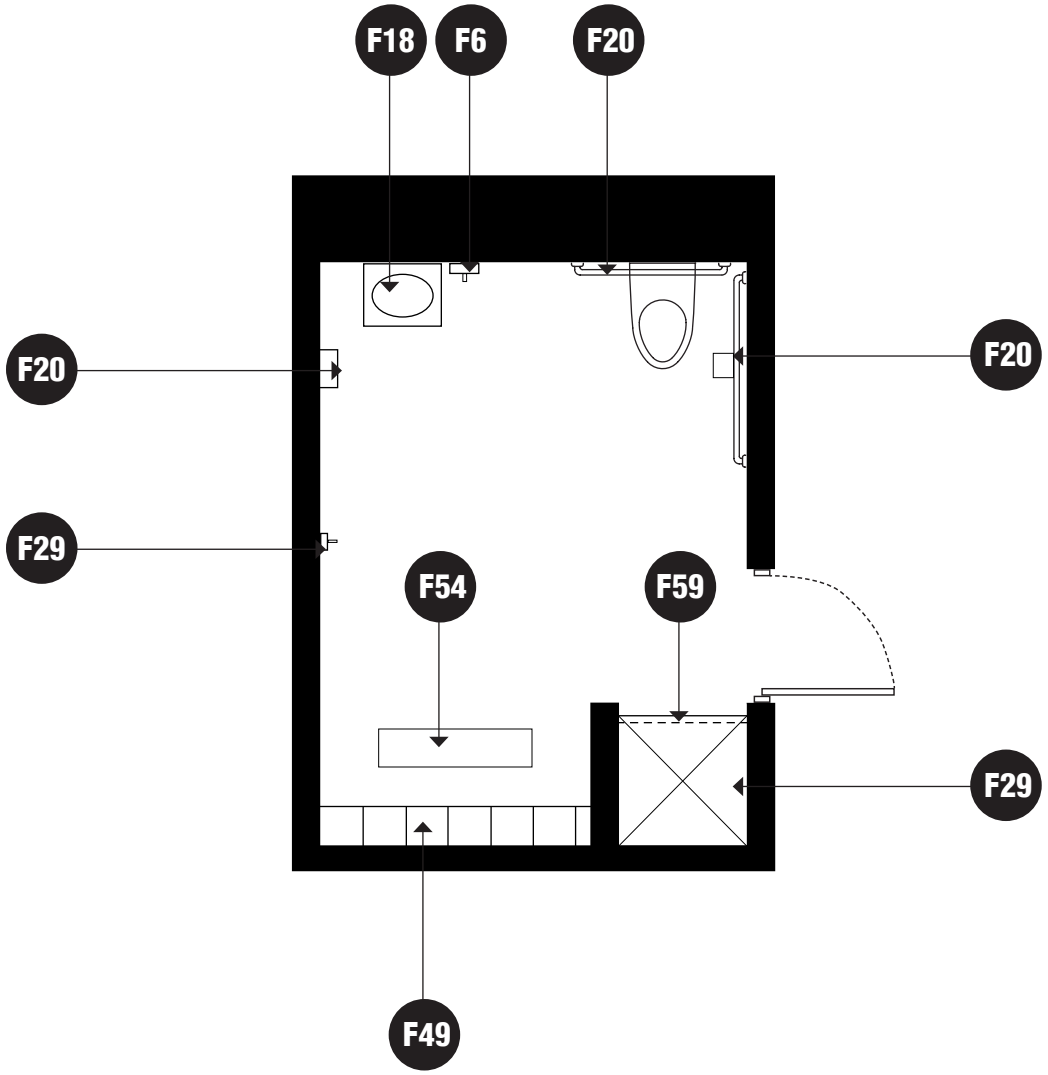
⬡ **loose furnishings**

L36 flammables storage

L46 step ladder

L41 chair dollies

▶| data drop





PKC-EC /// **TOILET / SHOWER / LOCKERS**

size

100 SF

capacity

maintainence and custodial staff

spatial relationships

adjacent and access to supply storage/ receiving

program activities

showering

changing clothes

plumbing

wall-mounted water closet

wall-mounted lavatory

ADA shower controls and head

floor drains - in restroom and shower

plumbing connections

LEGEND ///

● **fixed equipment**

F6 soap dispenser

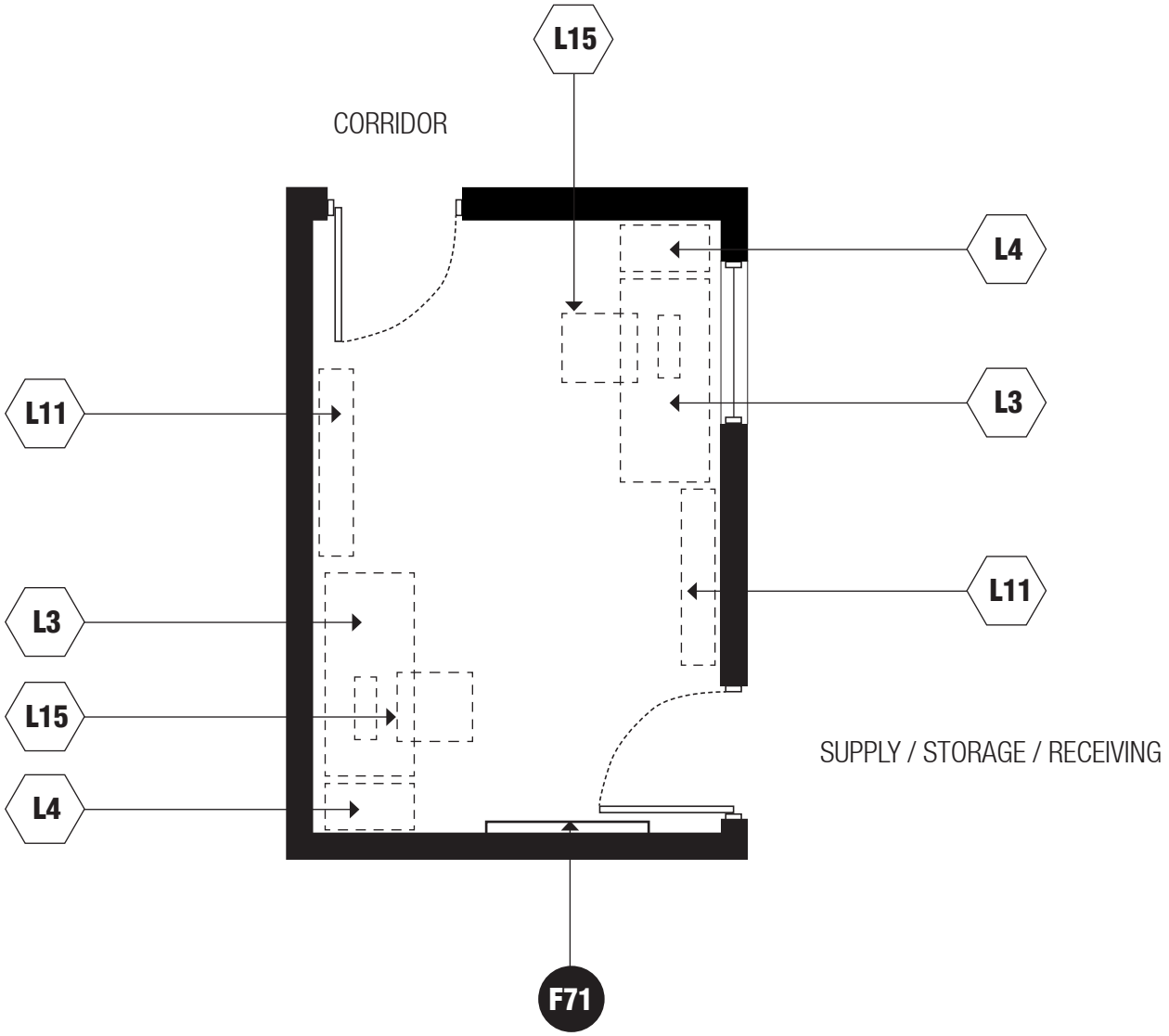
F18 mirror (24” x 60”)

F20 bathroom accessories

F29 ADA shower accessories

F49 lockers

F54 locker bench





PKC-EC /// **CUSTODIAL OFFICE**

size

150 SF

capacity

maintainence and custodial staff

building engineer

spatial relationships

adjacent and access to supply storage/ receiving

access to corridor

near custodial toilet

program activities

conferences with staff and other visitors

telephone calls

LEGEND ///

● **fixed equipment**

F71 tack board (4 LF)

⬡ **loose furnishings**

L3 teacher work surface with mobile storage (2)

L4 four-drawer lateral file cabinet (2)

L11 adjustable-height bookshelves (12 LF)

L15 task chair (2)

PKC-BS /// **BUILDING SUPPORT**

LARGE GROUP RESTROOMS
CUSTODIAL CLOSET
ELECTRICAL CLOSET
CORRIDORS
MECHNICAL / ELECTRICAL SPACE DECK
STAFF RESTROOM
TECHNOLOGY STORAGE

SPACE	QUANTITY	SF	TOTAL	NOTES
BUILDING SUPPORT				
Large Group Restrooms	2	INCLUDED	--	SF for individual spaces to be determined by the architect, will vary per project.
Custodial Closet	3	30	90	
Electrical Closet	3	30	90	
Corridors	--	INCLUDED	--	
Mechnical / Electrical Space Deck	--	INCLUDED	--	
Staff Restroom	4	50	200	
Technology Storage	2	50	100	
Total				**480**

Comments //

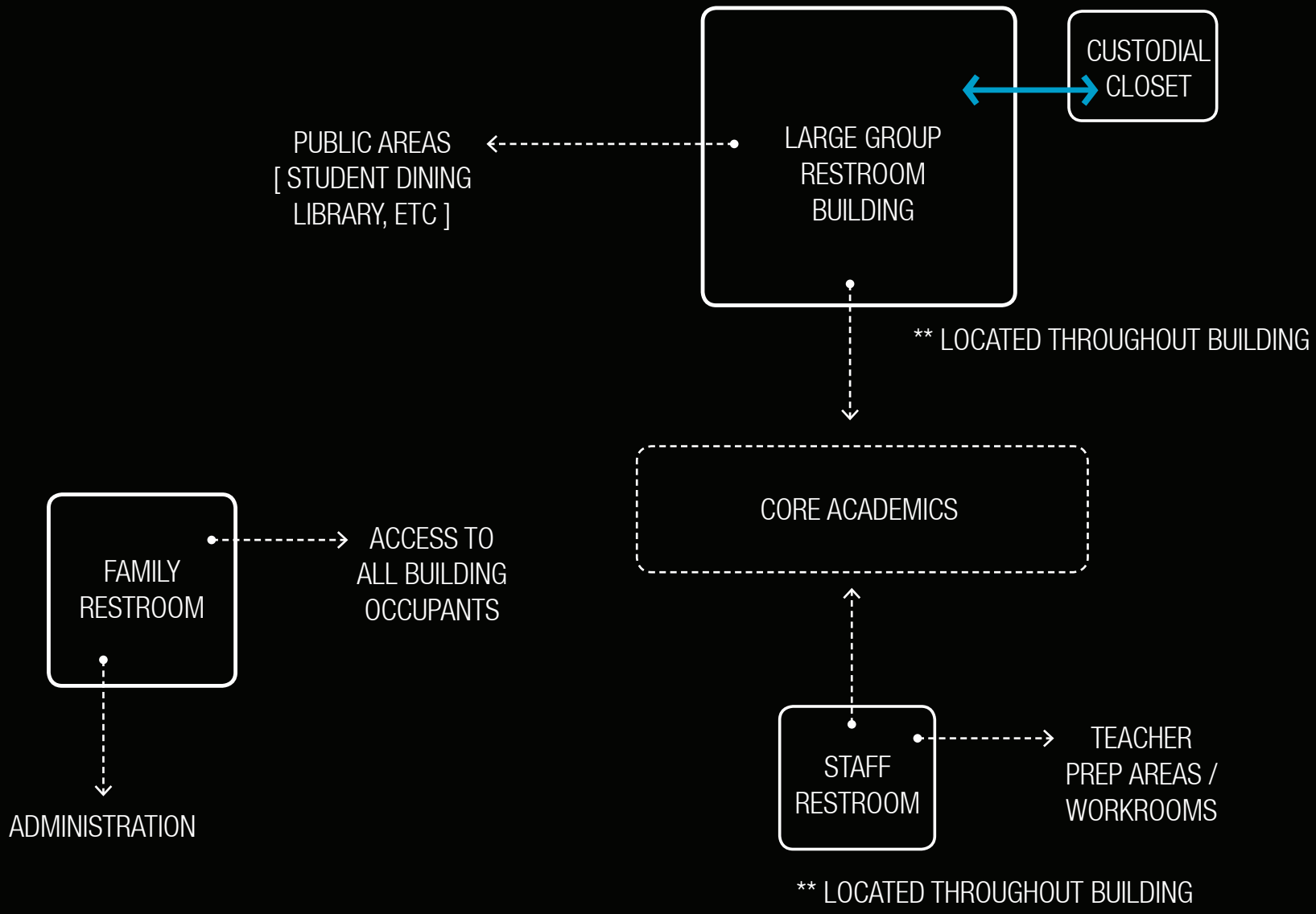
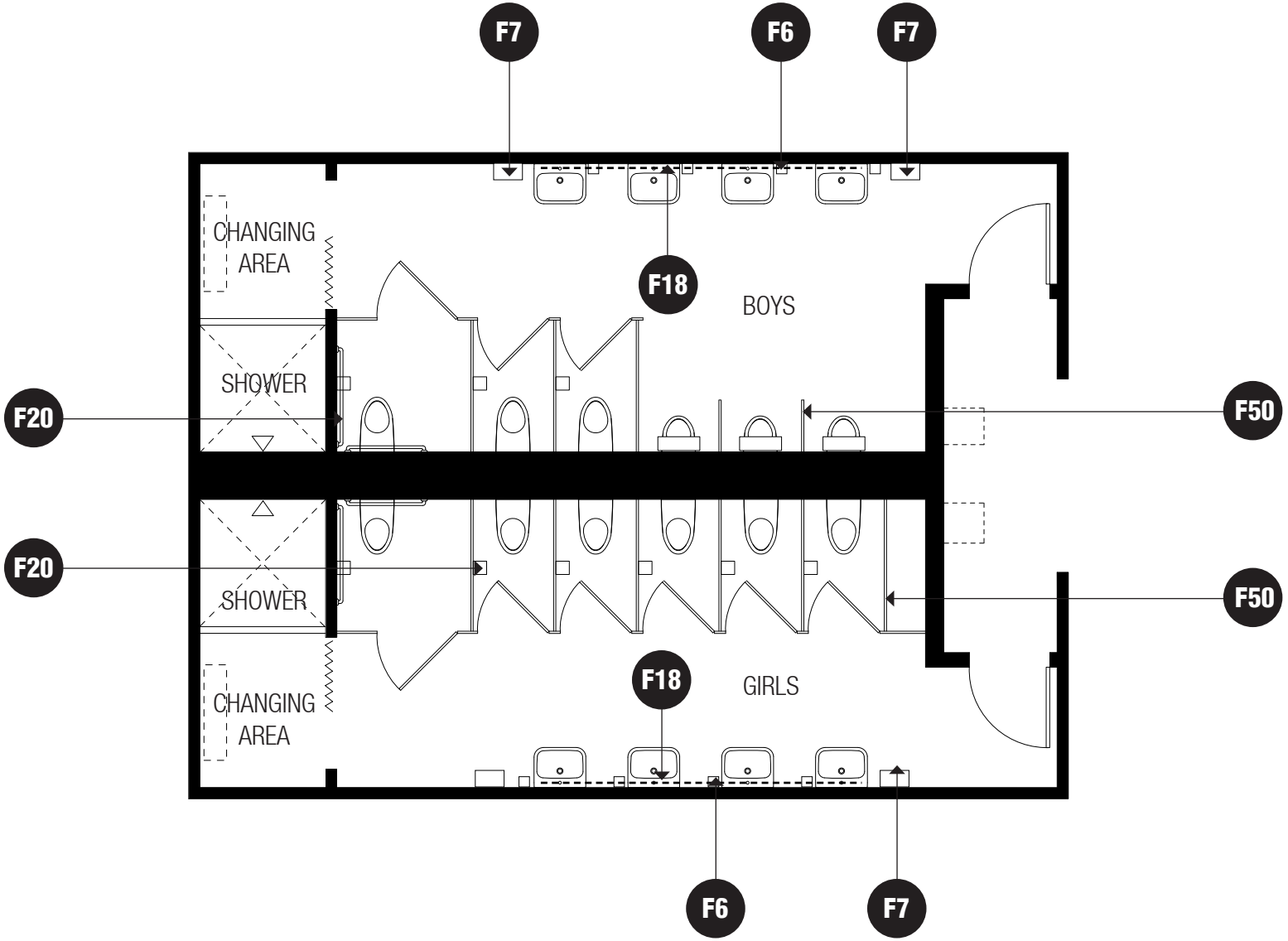


FIG. 15.0 // **BUILDING SUPPORT ADJACENCY DIAGRAM**



PKC-BS /// **LARGE GROUP RESTROOM**

0’ 2’ 4’ 8’

Spaces to be determined by design professional based on the number of fixtures required.

size

based on the sum of the program areas excluding building services, multiplied by 3.5%

capacity

based on size of program area

spatial relationships

near student dining area

near public use areas, such as media center and gymnasium

near academic core area

restrooms located in several areas throughout building

program activities

personal and health needs for the students

plumbing

wall-mounted water closets

wall-mounted lavatories or wash fountains

appropriate height fixtures by age

shower

plumbing connections

LEGEND ///

● **fixed equipment**

F6 soap dispenser

F7 towel dispenser

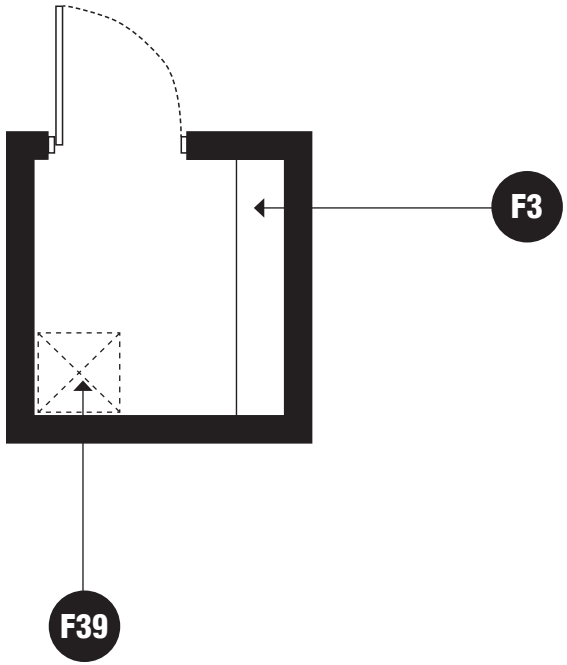
F18 mirror (24” x 60”)

F20 bathroom accessories

F50 toilet partitions

NOTES //

Where individual restrooms are provided in lieu of large group restrooms, refer to staff restroom.



size

30 SF

capacity

n/a

spatial relationships

near large group restrooms

provide one per floor

program activities

space for storage of custodial supplies throughout the building

plumbing

service sink or floor drain sink

plumbing connections

LEGEND ///

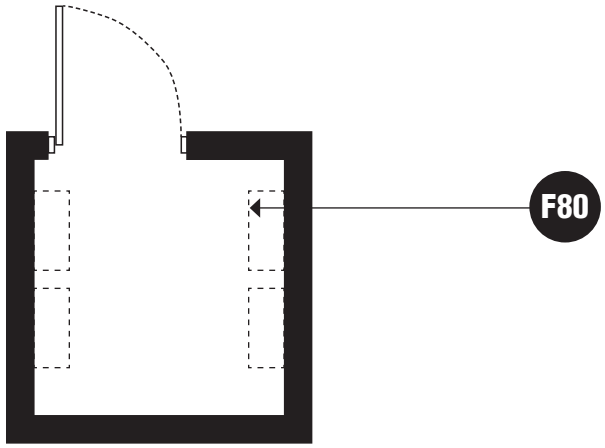
fixed equipment

F39 mop sink

F3 wall shelving



PKC-BS /// **CUSTODIAL CLOSET**



Spaces to be determined by design professional.

size

30 SF

capacity

n/a

program activities

space for electrical wiring and panels

LEGEND ///

fixed equipment

F80 electrical panel



PKC-BS /// ELECTRICAL CLOSET

- Corridors shall be a minimum of 8 feet wide; some areas of natural light is desirable; the designer should minimize long corridors lined with classroom doors.

- Extended learning areas are in addition to the minimum above and must not intrude into the egress pathway. Seating areas in extended learning areas must meet fire code.

- Lobbies are in addition to the circulation requirement.

- Instructional and activity areas shall be accessible by corridors without passing through another instructional or activity area.

- The corridors are to meet the egress requirements of applicable codes.

- Stairs, ramps, and elevators are included under the corridor category.

- It is recommended that stairs in multi-story buildings not be enclosed unless required by code. However, such a design should not allow students to lean over railings or put arms/legs through posts.

program activities

circulation space

vestibules

area of vestibules to be included within area allotted for corridors

width of vestibules can be no less than minimum width of adjacent corridor.

provide recessed vinyl floor mats (recommend 15 LF of surface mats in addition to vinyl mats)

provide automatic door operator on one leaf of main entrance/exit door and related vestibule door

plumbing

drinking water coolers with gooseneck faucet for water bottles

fixed equipment

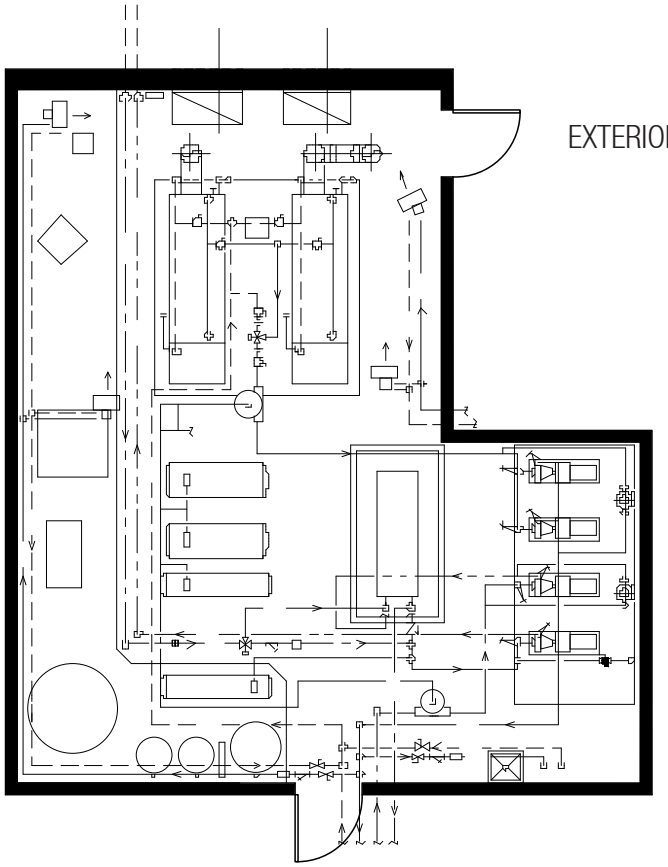
F51 fire extinguisher

F52 recessed floor mats

F53 digital boards

F71 tack board

F72 3D displays



PKC-BS /// MECH / ELECTRICAL SPACE DECK

Spaces to be determined by design professional.

size

based on the sum of the program areas, excluding building services, multiplied by 6.9%

capacity

based on size of program area

program activities

space for mechanical and electrical equipment

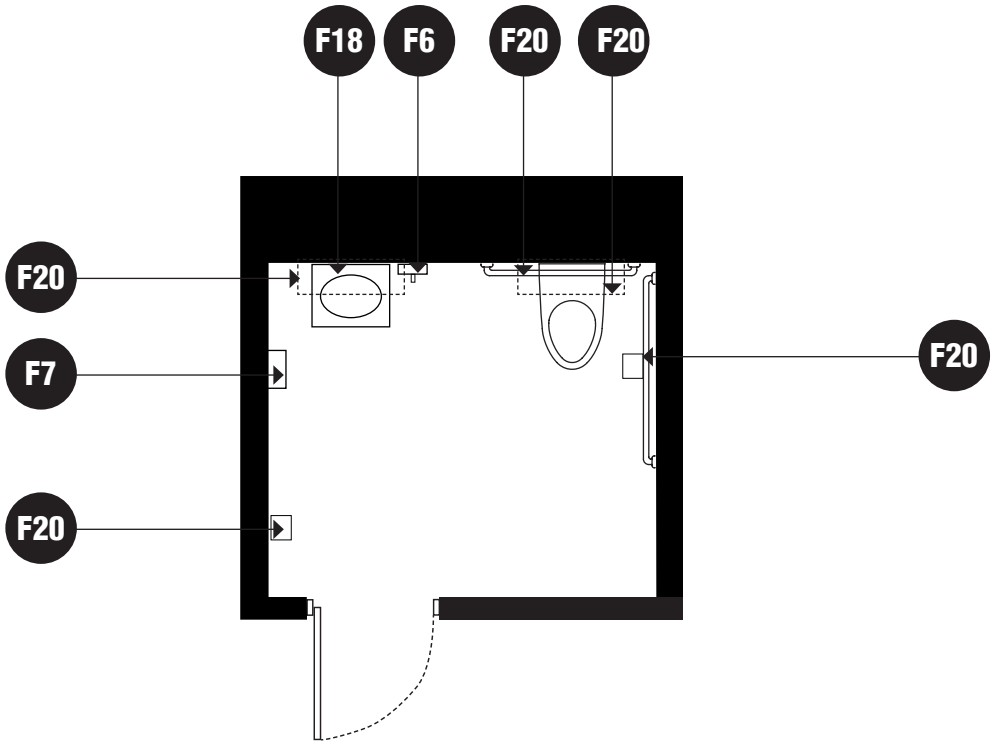
spatial relationships

accessible for maintenance and repair
access to outside
isolate from main area of building
near loading/receiving area
near custodial area

NOTES //

1. This is an example of a mechanical room. The equipment and layout will vary depending upon the heating, ventilating, and air conditioning system used.
2. A penthouse is considered a mechanical room.







PKC-BS /// **STAFF RESTROOM**

size
50 SF
capacity
1 person
spatial relationships
near academic core classrooms
near teacher prep area/workroom
program activities
personal and health needs for teachers, staff, and other individuals
environmental considerations
uniform lighting
environmental sound control -
wall minimum STC 53
ceiling minimum CAC 35, NRC 0.40
moisture and stain resistant finishes
finishes
flooring:
ceramic tile
base:
resilient base
optional - ceramic mosaic tile or porcelain tile
ceiling:
suspended, acoustical
walls:
painted concrete masonry units
fire suppression
fire supression system
plumbing
wall-mounted water closet
wall-mounted lavatory
plumbing connections
floor drain
HVAC
exhaust air system
supplemental heat as required
electrical
single-level switching
fluorescent lighting
duplex receptacles
leveler
communications
central sound system
electronic safety and security
life safety devices per code

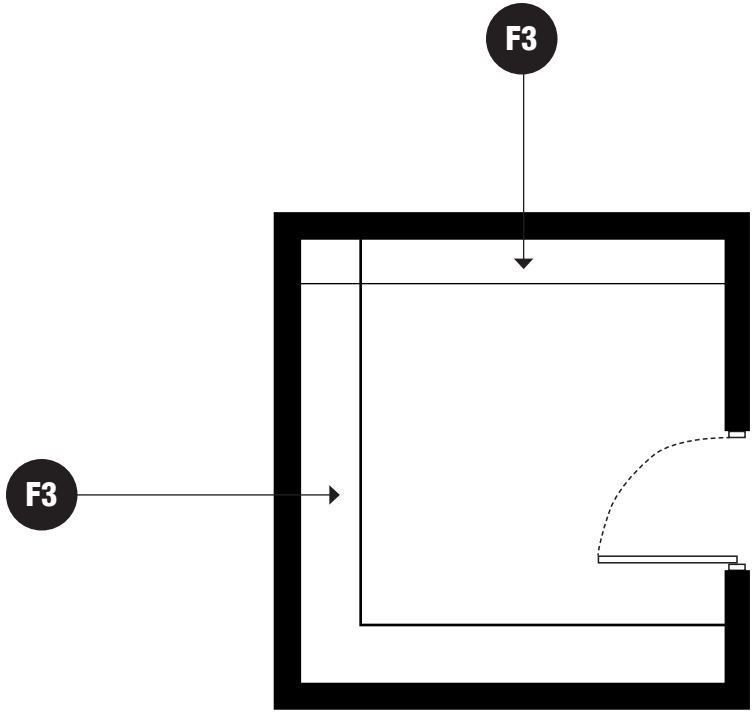
LEGEND ///

● **fixed equipment**

F6 soap dispenser
F7 towel dispenser
F18 mirror (24" x 60")
F20 bathroom accessories

NOTES //

1. Extend walls above ceiling to deck above for security and acoustical reasons.
2. Provide staff restrooms for both men and women.
3. Each pair of staff restrooms should be distributed throughout the building at appropriate locations.





PKC-BS /// **TECHNOLOGY STORAGE**

size
50 SF
capacity
n/a
ancillary spaces
computer storage
spatial relationships
n/a
program activities
materials storage
environmental considerations
uniform lighting
security of door
finishes
flooring:
resilient tile flooring
base:
resilient base
ceiling:
exposed structure
walls:
painted concrete masonry units
fire suppression
fire supression system
HVAC
supply/return air system
electrical
single-level switching
fluorescent lighting
duplex receptacles
electronic safety and security
life safety devices per code

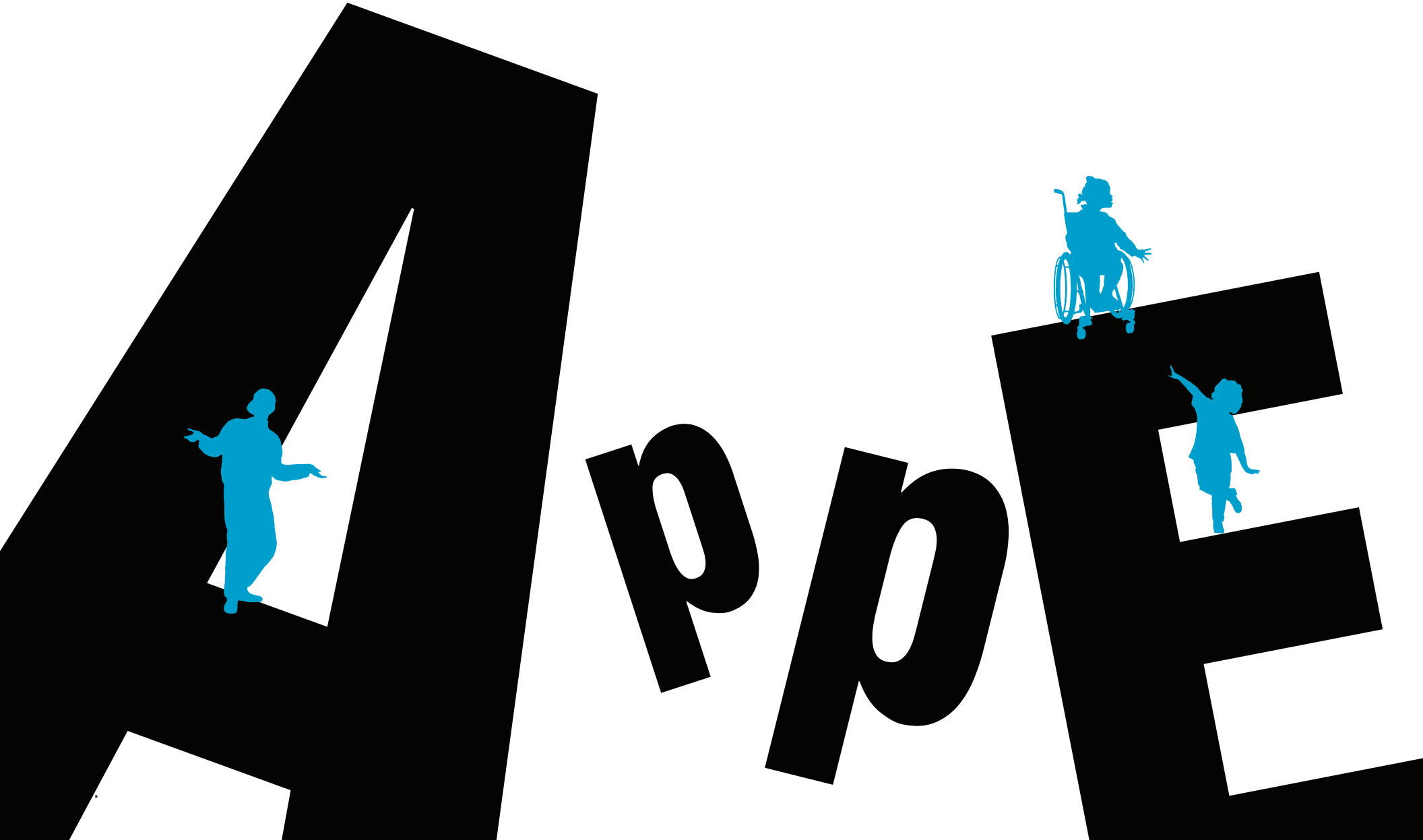
LEGEND ///

● **fixed equipment**

F3 wall shelving (12” and 18” deep)

NOTES //

1. Finishes/features: refer to _____ for specification references.
2. Loose furnishings and features shown represent one of many possible solutions.


Apple


Naix

space and tag list

● fixed equipment

F1 base/wall cabinets and shelving (deleted "around classroom sink")
F1.1 casework
F2 student cubbies
F3 wall shelving
F4 marker board
F5 tackable/magnet wall surface
F6 soap dispenser
F7 towel dispenser
F8 wall-mounted interactive electronic presentation device
F9 classroom sink
F9.2 rust-resistant shelving
F10 demonstration kitchen
F11 periphery science station
F12 rust-resistant deep shelving and dunnage racks
F13 sound system
F14 36" and 42" grab bars
F15 periphery kitchen station
F16 washer/dryer
F17 audio/video recording and playback equipment
F18 mirror
F19 toilet tissue holder
F20 bathroom accessories
F21 peg board
F22 basketball goals
F23 operable partition- motorized
F24 climbing wall
F25 treatment cubicle curtain
F27 amphitheater
F29 ADA shower accessories
F31 stage curtains
F32 stage lighting
F33 pot washing sinks
F34 food preparation sinks
F35 hand sinks
F36 work tables
F37 warming/holding cabinets
F38 refrigeration reach-in
F39 mop sink
F40 chemical storage
F41 exhaust hood systems
F42 food wells and full service sneeze
F43 guard
F44 self-contained refrigerated cold pan
F45 library case work
motorized projection screen
F49 lockers
F50 toilet partitions
F51 fire extinguisher
F52 recessed floor mats
F53 digital boards
F54 locker bench
F55 folding utility shelf
F56 30" itinerant/aid station
F57 kitchenette
F58 changing table
F59 shower curtain/rod
F62 sound enhancement system
F63 towel hook
F64 filtered water fountain with bubbler and gooseneck bottle filler
F65 recycling center
F66 oven
F67 convection steamer
F68 range
F69 ware washing machine
F70 mop rack
F71 tack board
F72 3d displays
F73 loading dock levelers and dock bumpers
F74 coat hook-bathroom accessory
F75 sanitary napkin dispenser

F76 sanitary napkin disposal
F77 mounted child seat
F78 child changing station
F79 tackable surface
F80 electrical panel
F81 two way mirror

⬡ loose furnishings

L1 stackable/nesting chairs
L2 stackable/nesting tables
L3 teacher work surface with mobile
L4 storage and two chairs
L5 four-drawer lateral file cabinet
three bound rugs-group area, block area, and reading area
L6 mobile shelving
L7 teacher's lockable wardrobe
L8 tall cabinet with shelves
L9 learning center sets - sand/water table, kitchen, art cart, etc.
L10 student desks
L11 adjustable height bookshelves
L12 admin workstation and chair
L13 small table
L14 computer station
L15 task chair
L16 bound group rug
L17 printer station
L18 lounge chairs
L19 conference table
L20 executive chairs
L21 work table
L22 safe
L23 computer desk return
L24 mobile exam table
L25 nurse stool
L26 refrigerator
L27 health suite cot
L28 folding chairs
L29 choral risers
L30 mobile a/v cabinet
L31 posture chair
L32 conductor's podium and stool
L33 upright piano
L34 tumbling mats
L35 ball bins
L36 flammables storage
L37 dance barres
L38 play equipment
L39 cafeteria tables
L40 point-of-sale station
L41 chair dollies
L42 drying rack
L43 flat storage
L44 kiln
L45 greenware shelving
L46 step ladder
L47 music stand
L48 stainless steel mobile preparation tables
L49 wastebasket
L50 small conference table
L51 laptop charging cart
L52 telecommunications rack
L53 portable sound system
L54 bleachers
L55 milk coolers

miscellaneous

M1 high-speed and/or large format printers
M2 color printers
M3 barcode reader
M4 photocopy machine
M5 digital scanner
M6 laminator
M7 desktop computer
M8 child play area
M9 large shredder

energy / environmental criteria

Scientists who study the “neuroscience of learning” are finding that certain lighting, acoustics, and spatial relationships support or hinder the learning process. The following criteria should be used when creating optimal learning and teaching environments.

	DESIGN PARAMETERS	PARAMETER NOTES
LIGHTING QUALITY // improving natural and artificial lighting in classrooms		
1 Controlled Natural Lighting (Glazing)	10-12% of floor SF	LEED and Green Globe
2 Artificial Light	35-50 foot candles	IES
ENVIRONMENTAL AIR QUALITY // addressing temperature control, ventilation, air filtration, carbon dioxide levels, and HVAC background noise to ensure comfortable rooms		
1 Winter Temperature	68.5 - 75.5 degrees	EPA 2000 and ASHRAE 55-04
Summer Temperature	74 - 80 degrees	
2 Humidity	30 - 60% relative humidity	EPA 2000 and ASHRAE 55-04
3 Air Changes	6 - 10 per hour	ASHRAE
4 Outdoor Air Ventilation	10 CFM per person	Plus 0.12 per SF
5 Air Filtration	MERV 13	LEED
	MERV 6 - 8	ASHRAE 52.2-2007 and 62.1-2007
6 Carbon Dioxide Levels	below 700 PPM above outdoor air	ASHRAE 62.1-2007
7 HVAC Background Noise Levels	RC(N) Mark II level of 37	ASHRAE Handbook Chapter 47

	DESIGN PARAMETERS	PARAMETER NOTES
ACOUSTICS // limiting reverberation and background noise and improving sound isolation		
1 Reverberation	0.6 per second	ANSI S12.60-2002
2 Background Noise	45 dBA	LEED
3 Sound Isolation	STC 45 between classrooms	
TECHNOLOGY // providing data connections for online learning resources, AV equipment, closed-circuit televisions, and a sound system with emergency capabilities		
1 Data / Computer Drops	at teacher workstations and wireless access points	
2 Audio / Video Equipment		
Interactive Whiteboard		
Document Cameras		
Sound Reinforcement	amplifier, microphone, speakers	
3 Clock	synchronized with bell system	
4 Sound System and Emergency Call Box		
Ceiling or Wall Speaker	class change bells, emergency announcements	
5 CCTV Camera		
Security		
WebX Conferencing		
Distance Learning		

energy / environmental design

There is a high interest in using school buildings as teaching tools to teach environmental stewardship and awareness, while simultaneously providing engaging environments for students, staff, and community who use the facilities. The organization, understanding, and use of school buildings will have a major impact on student and staff conservation behavior.

The sustainable design and green features of any building can be addressed in an active or a passive manner: active interaction is based on digital displays, educational features, and curriculum-integrated learning about environmental issues; passive interaction is based on the program design, building configuration, green building features, and energy efficient building automation.

Passive Concepts //

1. Building Layout
    - Concentrate daylight and views to the outside to areas of frequent human interaction (e.g. classrooms, cafeterias, media centers, art rooms, music rooms) with passive solar design
    - Avoid excessive window areas in corridors, lobbies, hallways with no gathering opportunities (design for less than 45% of wall area)
    - Avoid skylights and use roof monitors with vertical glazing instead

2. Types of Building Materials
    - Use durable wall surfaces that are easy to clean
    - Design for cleanability with easy and safe access
    - Incorporate light colored pitched roofs to prevent heat gain and leakage
    - Install high performance walk-off mats at all points of entry
    - Design with noise minimization in mind

3. Uses of Technology
    - For instructional and administrative purposes, the new school should have extensive technology systems. These same infrastructures and technology components can be used to enhance the perception of the building's environmental components. Digital display of building's energy and water use at entrance and in cafeteria
    - Website with environmental features of the school
    - Use only vacancy sensors for classrooms, cafeteria, etc. to turn off (not on) lighting
    - Daylight sensors and dimming in larger areas (cafeteria, multi-purpose, etc.)

4. Vehicular and Pedestrian Traffic
    - Provide sufficient, covered, and secured bicycle storage
    - Provide bicycle lanes to building from all major access directions

5. Landscaping, Play/Practice Fields, Site, and Lighting
    - Use native high trees and low bushes and ground covers and locate to provide shade to the building
    - Non-intrusive lighting of all areas (not correctional-type lighting) according to the Light Pollution Credit in LEED-S with no lighting to leave property line

6. Green Curriculum
   - Provide outdoor classroom
   - Design interior with sense of building's orientation to north – east – south - west

Active Concepts //

1. Building Layout
   - Provide signage to educate users about interior and exterior green building features throughout
   - Provide signage for user behavior modification, e.g., ACPS policy for thermostat settings, reminders to turn equipment off when not in use
   - Provide visitor map with floor plan for location and explanation of green building features

2. Types of Building Materials
   - Provide view window to inside of wall constructions and mechanical room
   - Provide materials with environmental message in selective areas, e.g. 100% recycled post consumer plastic toilet compartments, wheat board cabinets, or furniture made of wood harvested from school site, and explain with signage

3. Uses of Technology
   - For instructional and administrative purposes, the new school should have extensive technology systems. These same infrastructures and technology components can be used to enhance the perception of the building's environmental components.
   - Green morning announcement with update on energy and water use
   - Student-conducted energy audits
   - School-based resource conservation program with frequent feedback to users

4. Vehicular and Pedestrian Traffic
   - Provide preferred parking for ACPS Green Fleet (for carpooling and fuel efficient vehicles)

5. Landscaping, Play/Practice Fields, Site, and Lighting
   - Use native high trees and low bushes (less than three feet high) to deter hiding
   - Use aesthetically pleasing fencing around perimeter of building
   - Non-intrusive lighting of all areas (not correctional-type lighting) according to the Light Pollution Credit in LEED-S with no lighting to leave property line
   - Reference the Alexandria City Landscaping Guidelines when providing landscaping

6. Green Curriculum
   - LEED credit Schools as a Teaching Tool requires 10 hours of instruction per student, grade, and school year on environmental issues related to the school building. The school building's design should support this requirement wherever possible

safety / security

ACPS wants to maintain an inviting environment, while simultaneously providing a safe environment for students, staff, and the community who use the facility and adjacent support services. The organization of a building will have a major impact on student behavior and safety concerns.

Building security can be addressed in an active or a passive manner: active security is based on security systems; passive security is based on program design, building configuration, and community participation. Schools should be based on passive concepts with applied active concepts where necessary.

The principles of the Crime Prevention Through Environmental Design ("CPTED") approach should be followed to incorporate passive safety and security measures. CPTED is the broader approach to safety and security that seeks building designs that encourage desirable behavior, heighten functionality, and decrease anti-social behavior.

There are three main considerations in CPTED:

1. **Natural Surveillance:** the capacity to see what is occurring without having to take special steps to do so
2. **Natural Access Control:** the capacity to limit who and how someone can enter a facility
3. **Territoriality:** the capacity to establish authority over an environment regarding who is in charge, who is allowed, and who is not welcome[1].

1. Building Layout

- Avoid blind spots, corners, and cubby holes
- Maintain lines of sight and use of opening to create transparency
- Locate administrative and teacher preparation with good visual contact of major circulation areas (i.e., corridors, cafeteria, bus drop-off, parking)
- Develop spatial relationships that naturally transition from one location to another
- Locate toilets in close proximity to classrooms
- Design toilets to balance the need for privacy with the ability to supervise
- Locate areas likely to have significant community (after-school) use close to parking and where these areas can be closed off from the rest of the building

2. Types of Building Materials

- Use durable wall surfaces and maintainable flooring materials that are easy to clean so graffiti and dirt can be removed
- Incorporate pitched roofs which inhibit roof entry and are aesthetically pleasing
- Operational part of windows on the ground floor should be in the upper portion to prevent access
- Install non-slip floors and walk-off mats at point of entry
- Use of interior glass to create a transparent environment within the school, and
- Colors, artificial lighting, and natural day lighting should be managed artfully to create an environment that is aesthetically pleasing in order to support student and faculty pride in the building.

3. Uses of Technology

- Phones in every instructional and support area
- Building-wide all-call designed to be heard throughout the school and on the play fields, when needed
- Motion or infra-red detectors, which can also conserve lighting costs
- Video cameras that are used for instructional purposes could also be used for security purposes during non-school hours
- Smoke and heat detectors located throughout the building
- Emergency call buttons in large parking areas, and magnetic locking systems and carefully-selected door hardware to facilitate lock downs in needed.
- Considerations should be given to zoning the building for non-school day uses in terms of both energy efficiency as well as security, to include lighting zones, securable zones, and mechanical zones

4. Visitor Management

- The front entry lobby should be welcoming and inviting for students, staff, and visitors with a central visitor registration area prominent upon entry
- Clear way finding signage should be included that directs visitors upon campus arrival to visitor registration and as well as throughout the building to provide overall building guidance
- A secured double vestibule or a video enabled front entry intercom buzzer system should be provide to manage visitor entry
- Front lobby and exterior displays should be provided for communicating school messages

6. Vehicular and Pedestrian Traffic

- Separate bus drop-off area from other vehicular traffic
- Separate staff and community parking areas
- Separate student (pedestrian) traffic flow

5. Landscaping, Play/Practice Fields, Site, and Lighting

- Use native high trees and low bushes (less than three feet high) to deter hiding
- Use aesthetically pleasing fencing around perimeter of the building
- Non-intrusive lighting of all areas (not correctional-type lighting) according to the Light Pollution
- Credit in LEED-Ss with no lighting to leave property line
  Provide security lighting around building and parking lots with photocell timer, motion sensor, and on/off capacity

[1]Schneider, Tod (September 2002). *Guide 4: Ensuring Quality School Facilities and Security Technologies: Safe and Secure: Guides to Creating Safer Schools*. Northwest Regional Educational Laboratory,

community use

Community involvement in education and educational involvement in the community can take a variety of forms before, during, and after the school day. The following is a partial list of potential community uses:

- Touring groups
- Speech/debate clubs
- After school youth enrichment
- Adult education
- Community meetings
- Mentoring programs
- Parent involvement
- School/business partnerships
- Alternative education programs
- Dance studios
- Community athletics
- Recreation programs
- Health screening
- Senior citizens activities
- Intramural sports programs
- Child care (staff, students, community)
- Voting
- Emergency shelter

Based on limitations established for the size of the facility and budget constraints, most of the community uses will likely need to focus on shared space that is used primarily for school programs during the school day and community uses during non-school hours. Priorities need to be established at the local site level to determine future community activities that may be added in order to be incorporated in the overall master plan.

Even within these constraints, opportunities exist. The areas that have the greatest possibility for community usage include:

- Performance/meeting area
- Library
- Play fields
- Computer labs
- Conference rooms
- Multipurpose room/gym
- Cafeteria

Consideration should be given to furniture and equipment selection for shared uses by students, very young children, and adults. The facility and site should be configured and zoned to enhance parking and circulation, security, and energy conservation. Adequate signage is needed to assist community members. Auxiliary storage needs to be made available for community programs

Collaboration and partnership require greater cooperation in the planning of schools and community facilities. It is important for the school division, governmental agencies, and corporate partnerships to participate collaboratively in the planning of schools.

Planning for future schools should include joint use considerations at the beginning of the process. School divisions and governmental agencies are beginning to realize that cooperation is needed, especially considering ever-shrinking budgets and meeting the diverse needs of the community. There are potential opportunities in jointly developing parks, libraries, and one-stop shopping

centers for human services. Partnerships and joint ventures should be considered and are encouraged by the board of education.